



## Comprehensive Nutrient Management Plan

For

Cold Springs Farm

(b) (6)

(b) (6)

PROJECT #: 238-08012A

Prepared in Cooperation with the:

**USDA – Natural Resources Conservation Service**

And

**Elizabeth Field Office**

**Jo Daviess Soil and Water Conservation District**

227 North Main Street

P.O. Box 502

Elizabeth, Illinois 61028

### Approved Conservation Planner and Certified CNMP Specialist

As an Approved Conservation Planner, I certify that I have reviewed this CNMP for technical adequacy and that the elements of the CNMP are technically compatible, reasonable and implementable.

#### **MANURE AND WASTEWATER HANDLING AND STORAGE**

Signature \_\_\_\_\_ Date: \_\_\_\_\_

Name & Title: James L. Evans, PE TSP # 075737

#### **LAND TREATMENT PRACTICES**

Signature \_\_\_\_\_ Date: \_\_\_\_\_

Name & Title: JIM E. McQUILKIN, CCA TSP # 055168

#### **NUTRIENT MANAGEMENT PLAN**

Signature \_\_\_\_\_ Date: \_\_\_\_\_

Name & Title: JIM E. McQUILKIN, CCA TSP # 055168

### Owner/Operator

As the owner/operator of this CNMP, I certify that I, as the decision maker, have been involved in the planning process and agree the items/practices listed in each element are needed. I understand that I am responsible for keeping all the necessary records associated with the implementation of this CNMP. It is my intent to implement/accomplish this CNMP in a timely manner as described in the plan.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited basis apply to all programs.) Persons with disabilities who require alternative means for communication or program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326W, Whitten Building, 14th and Independence Avenue SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.

S:\238\2008 project numbers\238-08012A (Cold Springs Farm CNMP)\Section 1-3 8 D-I (CNMP Write Up)\Cold Springs Farms CNMP.doc

<b>Appendix F</b>	<b>Feed Management (Optional if Needed)</b>
<b>Appendix G</b>	<b>Guidance Information</b> Air Quality and Pathogen Management Considerations Winter Application Manure Application on Steep Fields Manure Application on Fields Subject to Flooding General Liquid Manure Applications Liquid Manure Application – Tile Drained Fields Manure Application on Fields with “Systematic Surface Drainage” Minimum Ground Cover for Manure Applications
<b>Appendix H</b>	<b>Other Utilization Components (Optional if Needed)</b>
<b>Appendix I</b>	<b>Available Water Capacity (AWC) Practical Soil Moisture Interpretations for Various Soils Textures and Conditions to Determine Liquid Waste Volume Applications Not to Exceed AWC</b>

MANAGEMENT PLAN" (NMP) DEVELOPED ON THEIR LAND WITH NRCS OR APPROVED 3<sup>RD</sup> PARTY ASSISTANCE.

## **SECTION 2**

### **Farm Overview**

*(Farm Pictures, Plat maps, Topo maps)*

---

All fields have been identified as reasonably close to the site (<5 miles). The LMFA and NRCS standard 590/633 allow a buildup of up to 300 lb/acre of P1. It is not desirable to reach levels higher than 300lb/ac of P1.

The setbacks for all the application fields are listed below. All setbacks are in conjunction with the application of manure with or without incorporation.

Setback	Distance, ft
Wells	150
Surface Water	200
Residence <sup>1</sup>	1320

<sup>1</sup> If manure is not injected or incorporated on day of application.

*{Describe Topography}*

COPY

Form Approved  
OMB No. 2040-0250  
Approval expires 12-15-05

EPA I.D. NUMBER (copy from Item 1 of Form 1)

FORM 2B NPDES	EPA U.S. ENVIRONMENTAL PROTECTION AGENCY APPLICATIONS FOR PERMIT TO DISCHARGE WASTEWATER CONCENTRATED ANIMAL FEEDING OPERATIONS AND AQUATIC ANIMAL PRODUCTION FACILITIES		
<b>I. GENERAL INFORMATION</b> Applying for:   Individual Permit <input type="checkbox"/> Coverage Under General Permit <input type="checkbox"/>			
<b>A. TYPE OF BUSINESS</b>		<b>B. CONTACT INFORMATION</b>	
<input checked="" type="checkbox"/> 1. Concentrated Animal Feeding Operation (complete items B, C, D, and Section II)  <input type="checkbox"/> 2. Concentrated Aquatic Animal Production Facility (complete items B, C, and section III)		Owner/or Operator Name: (b) (6) Telephone: (b) (6) Address: (b) (6) Wilmette State: Zip Code: (b) (6)	
<b>C. FACILITY OPERATION STATUS</b>			
<input checked="" type="checkbox"/> 1. Existing Facility  <input type="checkbox"/> 2. Proposed Facility			
<b>D. FACILITY INFORMATION</b>			
Name: COLD SPRINGS FARM (b) (6)		Telephone: (b) (6) Facsimile: (b) (6) Zip Code: (b) (6)	
County: Jo Daviess		Latitude: 42 Deg 16 Min North      Longitude: 90 Deg 20 Min West	
If contract operation: Name of Integrator: _____ Address of Integrator: _____			
<b>II. CONCENTRATED ANIMAL FEEDING OPERATION CHARACTERISTICS</b>			
<b>A. TYPE AND NUMBER OF ANIMALS</b>			<b>B. Manure, Litter and/or Wastewater Production and Use</b>
2. ANIMALS			a) How much manure, litter and wastewater is generated annually by the facility? 10400 tons _____ gallons  b) If land applied how many acres of land under the control of the applicant are available for applying the CAFOs manure/litter/wastewater? _____ acres  c) How many tons of manure or litter, or gallons of wastewater produced by the CAFO will be transferred annually to other persons? tons/gallons (circle one) 7500 tons
1. TYPE	NO. IN OPEN CONFINEMENT	NO. HOUSED UNDER ROOF	
<input type="checkbox"/> Mature Dairy Cows			
<input type="checkbox"/> Dairy Heifers			
<input type="checkbox"/> Veal Calves			
<input checked="" type="checkbox"/> Cattle (not dairy or veal)	1,740	1,060	
<input type="checkbox"/> Swine (55 lbs. or over)			
<input type="checkbox"/> Swine (under 55 lbs.)			
<input type="checkbox"/> Horses			
<input type="checkbox"/> Sheep or Lambs			
<input type="checkbox"/> Turkeys			

<input type="checkbox"/> Chickens (Broilers)			
<input type="checkbox"/> Chickens (Layers)			
<input type="checkbox"/> Ducks			
<input type="checkbox"/> Other Specify _____			
3. TOTAL ANIMALS	1,740	1,060	

C. ☒ TOPOGRAPHIC MAP

D. TYPE OF CONTAINMENT, STORAGE AND CAPACITY

1. Type of Containment	Total Capacity (in gallons)	
<input type="checkbox"/> Lagoon		
<input type="checkbox"/> Holding Pond		
<input checked="" type="checkbox"/> Evaporation Pond <i>8</i>	14,000,000	
<input checked="" type="checkbox"/> Other: Specify <u>Concrete Pits</u>	225,000	

2. Report the total number of acres contributing drainage: 14.3 acres

3. Type of Storage	Total Number of Days	Total Capacity (gallons/tons)	
<input type="checkbox"/> Anaerobic Lagoon			
<input type="checkbox"/> Storage Lagoon			
<input type="checkbox"/> Evaporation Pond			
<input type="checkbox"/> Aboveground Storage Tanks			
<input type="checkbox"/> Belowground Storage Tanks			
<input type="checkbox"/> Roofed Storage Shed			
<input type="checkbox"/> Concrete Pad			
<input checked="" type="checkbox"/> Impervious Soil Pad	180	6,250 tons	
<input type="checkbox"/> Other: Specify _____			

E. NUTRIENT MANAGEMENT PLAN

A. Has a nutrient management plan been developed? ☒ Yes ☐ No

B. Is a nutrient management plan being implemented for the facility? ☒ Yes ☐ No

C. If no, when will the nutrient management plan be developed? Date: \_\_\_\_\_

D. The date of the last review or revision of the nutrient management plan. Date: 12/01/06

E. If not land applying, describe alternative use(s) of manure, litter and or wastewater: Composting

**F. LAND APPLICATION BEST MANAGEMENT PRACTICES**  
Please check any of the following best management practices that are being implemented at the facility to control runoff and protect water quality:

☒ Buffers   ☒ Setbacks   ☒ Conservation tillage   ☒ Constructed wetlands   ☐ Infiltration field   ☒ Grass filter   ☐ Terrace

**III. CONCENTRATED AQUATIC ANIMAL PRODUCTION FACILITY CHARACTERISTICS**

A. For each outfall give the maximum daily flow, maximum 30-day flow, and the long-term average flow.				B. Indicate the total number of ponds, raceways, and similar structures in your facility.		
1. Outfall No.	2. Flow (gallons per day)			1. Ponds	2. Raceways	3. Other
	a. Maximum Daily	b. Maximum 30 Day	c. Long Term Average	C. Provide the name of the receiving water and the source of water used by your facility.		
				1. Receiving Water	2. Water Source	

D. List the species of fish or aquatic animals held and fed at your facility. For each species, give the total weight produced by your facility per year in pounds of harvestable weight, and also give the maximum weight present at any one time.

1. Cold Water Species			2. Warm Water Species		
a. Species	b. Harvestable Weight (pounds)		a. Species	b. Harvestable Weight (pounds)	
	(1) Total Yearly	(2) Maximum		(1) Total Yearly	(2) Maximum

E. Report the total pounds of food during the calendar month of maximum feeding.	1. Month	2. Pounds of Food
--	----------	-------------------

**IV. CERTIFICATION**

*I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true accurate and complete. I am aware that there are significant penalties for submitting false information, including the*

(b) (6)

(b) (6)

D. Date Signed 12/18/06

Please print or type in the unshaded areas only.

Form Approved. OMB No. 2040-0086.

FORM 1 GENERAL		U.S. ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION Consolidated Permits Program (Read the "General Instructions" before starting.)		I. EPA I.D. NUMBER		T/A		C			
LABEL ITEMS		PLEASE PLACE LABEL IN THIS SPACE		GENERAL INSTRUCTIONS		13		14 15			
I. EPA I.D. NUMBER				If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.							
III. FACILITY NAME											
V. FACILITY MAILING ADDRESS											
VI. FACILITY LOCATION											
II. POLLUTANT CHARACTERISTICS											
INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of <b>bold-faced terms</b> .											
SPECIFIC QUESTIONS			Mark "X"			SPECIFIC QUESTIONS			Mark "X"		
			YES	NO	FORM ATTACHED				YES	NO	FORM ATTACHED
A. Is this facility a <b>publicly owned treatment works</b> which results in a <b>discharge to waters of the U.S.</b> ? (FORM 2A)				X		B. Does or will this facility (either existing or proposed) include a <b>concentrated animal feeding operation</b> or <b>aquatic animal production facility</b> which results in a <b>discharge to waters of the U.S.</b> ? (FORM 2B)			X		
			16	17	18				19	20	21
C. Is this a facility which currently results in <b>discharges to waters of the U.S.</b> other than those described in A or B. above? (FORM 2C)				X		D. Is this a proposed facility (other than those described in A or B above) which will result in a <b>discharge to waters of the U.S.</b> ? (FORM 2D)				X	
			22	23	24				25	26	27
E. Does or will this facility treat, store, or dispose of <b>hazardous wastes</b> ? (FORM 3)				X		F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)				X	
			28	29	30				31	32	33
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)				X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)				X	
			34	35	36				37	38	39
I. Is this facility a proposed <b>stationary source</b> which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)				X		J. Is this facility a proposed <b>stationary source</b> which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)				X	
			40	41	42				43	44	45
III. NAME OF FACILITY											
1 SKIP COLD SPRINGS FARM											
15 16 - 29 30 69											
IV. FACILITY CONTACT											
A. NAME & TITLE (last, first, & title)											
2 (b) (6) GENERAL MANAGER											
15 16 45 46 48 49 51 52 55											
B. PHONE (area code & no.)											
2 (b) (6)											
15 16 45 46 48 49 51 52 55											
V. FACILITY MAILING ADDRESS											
A. STREET OR P.O. BOX											
3 (b) (6)											
15 16 45											
B. CITY OR TOWN											
4 (b) (6)											
15 16 47 51											
C. STATE											
47 51											
D. ZIP CODE											
47 51											
VI. FACILITY LOCATION											
(b) (6)											
45											
B. COUNTY NAME											
JO DAVIESS											
46 70											
C. CITY OR TOWN											
(b) (6)											
46 70											
D. STATE											
47 51											
E. ZIP CODE											
47 51											
F. COUNTY CODE (if known)											
47 51											
15 16 40 41 42 47 51 52 54											

VII. SIC CODES (4-digit, in order of priority)

15	15	15	15
VIII. OPERATOR INFORMATION			

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other," specify.)	
--	--

E. STREET OR P.O. BOX

F. CITY OR TOWN

	<input checked="" type="checkbox"/>	X EXISTING ENVIRONMENTAL PERMITS
--	-------------------------------------	----------------------------------

13	13	13
XI. MAP		

XII. NATURE OF BUSINESS (provide a brief description)

XIII. CERTIFICATION (see instructions)

COMMENTS FOR OFFICIAL USE ONLY

EPA Form 3510-1 (8-90)



# COLD SPRINGS FARM

(b) (6)



December 20, 2006

Permit Contact (5EP)  
U.S. Environmental Protection Agency  
77 West Jackson Blvd.  
Chicago, IL 60604-3507

Re: NPDES Permit Application

Dear EPA:

Cold Springs Farm is in the business of feeding beef cattle and has, on most occasions, enough cattle on premises to be classified a concentrated animal feeding operation (CAFO). As such, enclosed are completed NPDES Form 2B and EPA General Form 1.

Since the late 1990's, Cold Springs Farm has made a conscientious effort to record, verify and maintain records of soil & water analysis, animal waste applications and similar management practices. Our feedlot foreman, Brad Bauer, has been a Certified Livestock Manager for six years and two additional employees were certified in February, 2006.

As you review the information enclosed, please don't hesitate to contact me with any questions or supportive information you may require. Thank you.

Yours truly,  
COLD SPRINGS FARM

(b) (6)



General Manager

(b) (6)



**FedEx** USA AirbillFedEx  
Tracking  
Number

810286253242

Form  
I.D. No.

0210

Sender's Copy

**1 From** (please print and press hard)  
Date 12/20/06 Sender's FedEx Account Number 1837-1965-3

Sender's Name COLD SPRINGS FARM Phone (773) 551-1111  
(b) (6)

**2 Your Internal Billing Reference Information**  
(Optional) (First 24 characters will appear on invoice)

**3 To** (please print and press hard)  
Recipient's Name PERMIT CONTACT (SEP) Phone (312) 353-2800

Company U.S. Environmental Protection Agency

Address 77 W. Jackson Dept./Floor/Suite/Room  
(To "HOLD" at FedEx location, print FedEx address here) (We Cannot Deliver to P.O. Boxes or P.O. ZIP Codes)

City CHICAGO State IL ZIP 60604

**For HOLD at FedEx Location check here**

☐ Hold Weekday (Not available with FedEx First Overnight)  
☐ Hold Saturday (Not available at all locations and FedEx 2Day only)

**For WEEKEND Delivery check here**

☐ Saturday Delivery (Available for FedEx Priority Overnight and FedEx 2Day only)  
☐ NEW Sunday Delivery (Available for FedEx Priority Overnight only)

**Service Conditions, Declared Value, and Limit of Liability** - By using this Airbill, you agree to the service conditions in our current Service Guide or U.S. Government Service Guide. Both are available on request. SEE BACK OF SENDER'S COPY OF THIS AIRBILL FOR INFORMATION AND ADDITIONAL TERMS. We will not be responsible for any claim in excess of \$100 per package whether the result of loss, damage, or delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, and document your

actual loss in a timely manner. Your right to recover from us for any loss includes intrinsic value of the package, loss of sales, interest, profit, attorney's fees, costs, and other forms of damage, whether direct, incidental, consequential, or special, and is limited to the greater of \$100 or the declared value but cannot exceed actual documented loss. The maximum declared value for any FedEx Letter and FedEx Pak is \$500. Federal Express may, upon your request, and with some limitations, refund all transportation charges paid. See the FedEx Service Guide for further details.

**Questions?**

Call 1-800-Go-FedEx® (800)463-3339

*The World On Time*

0082107932

**4a Express Package Service** Packages under 150 lbs. Delivery commitment may be later in some areas.  
☐ FedEx Priority Overnight (Next business morning)  
☒ FedEx Standard Overnight (Next business afternoon)  
☐ FedEx First Overnight (Earliest next business morning delivery to select locations) (Higher rates apply)  
☐ FedEx 2Day (Second business day)  
☐ FedEx Express Saver (Third business day)  
FedEx Letter Rate not available. Minimum charge: One pound rate.

**4b Express Freight Service** Packages over 150 lbs. Delivery commitment may be later in some areas.  
☐ FedEx Overnight Freight (Next business day)  
☐ FedEx 2Day Freight (Second business day)  
☐ FedEx Express Saver Freight (Up to 3 business days)  
(Call for delivery schedule. See back for detailed descriptions of freight services.)

**5 Packaging**  
☐ FedEx Letter  
☐ FedEx Pak  
☒ FedEx Box  
☐ FedEx Tube  
☐ Other Pkg.  
Declared value limit \$500.

**6 Special Handling** (One box must be checked)  
Does this shipment contain dangerous goods?\* ☐ No ☐ Yes (As per attached Shipper's Declaration)  
☐ Dry Ice (Dry Ice, 9, UN 1845 x kg.) ☐ Cargo Aircraft Only  
\*Dangerous Goods cannot be shipped in FedEx packaging.

**7 Payment**  
Bill to: ☒ Sender (Account No. in Section 1 will be billed)  
☐ Recipient (Enter FedEx Account No. or Credit Card No. below)  
☐ Third Party  
☐ Credit Card  
☐ Cash/Check

FedEx Account No. \_\_\_\_\_ Exp. Date \_\_\_\_\_  
Credit Card No. \_\_\_\_\_

Total Packages	Total Weight	Total Declared Value*	Total Charges
1	5	\$ .00	\$

\*When declaring a value higher than \$100 per shipment, you pay an additional charge. See SERVICE CONDITIONS, DECLARED VALUE, AND LIMIT OF LIABILITY section for further information.

**8 Release Signature** Sign to authorize delivery without obtaining signature.

Your signature authorizes Federal Express to deliver this shipment without obtaining a signature and agrees to indemnify and hold harmless Federal Express from any resulting claims.

321

Rev. Date 3/98  
Part # 153023PG  
©1994-98 FedEx  
PRINTED IN U.S.A.  
GBFE 11/98

## Cold Springs Farm

Cold Springs Farm was established in 1964 when Bob [REDACTED] acquired the 400 acre "King Sisters" farm in Jo Daviess County, Illinois. Within the following six years, contiguous farm ground was purchased and a cow/calf herd was established. A small set of feeding pens was built to allow the calves to be fed out and by the late 1970's the vision of feeding cattle was becoming a reality. Recognizing the potential impact, Bob [REDACTED] & his farm management personnel consulted authorities, studied publications and embarked on a plan to develop a low impact operation. Following are many of the steps that were taken to create the facility that exists today.

During the early 1980's we engineered and constructed several feeding pens on the farm. With input & guidance from FSA personnel, the Universities of Illinois & Iowa State, engineers and others, we built a capacity for nearly 3,000 cattle. Approximately half of the capacity was for feeding cattle on dirt mounds and the balance on open concrete with a shed at one end.

Consistent with our personal philosophies, these facilities were engineered and built to protect the environment and to insure that water leaving our farm was the same as water flowing into it. Each dirt pen was designed with a manure alleyway where waste could be easily pushed, removed and spread. Pairs of evaporation ponds were built below these dirt pens for excess runoff or un-seasonal rains. Below each concrete pen, a concrete manure pit was built capable of holding up to 1,000 cubic yards of waste. Below that were additional evaporation ponds to, once again, handle any overflow. It has been our management practice to remove & spread waste from the alleyways and concrete pits before any precipitation event would wash any of this waste into the evaporation ponds.

Anticipating the need to stabilize waste material and monitor field analysis, in the early 1990's we invested in a composting aerator and tractor to operate it. The Brown Bear Corp. composting/aerator head has proven to be a real asset. Not only will it windrow manure compost, but its use in the dirt pens alleviates erosion and keeps the pens drier. Our ability to compost has allowed us to move waste material to offsite locations such as landscapers, nurseries and developers. With the compost having significantly lower N P K values, our field applications have not put a stress on the N P K of each field. According to the Nebraska manufacturer, Brown Bear, we were one of the first to acquire their equipment for feedlot waste composting. Though they refer to us as a dairy, the following Web link has a piece about us: <http://www.brownbearcorp.com/Beef.htm>

We and our employees take pride in our stewardship of the land. It is our philosophy and practice to protect the environment, waterways, wildlife, and preserve the peace and tranquility of the area. Our employees are trained in the practices of the livestock management facilities act and three of them are Certified Livestock Managers. Furthering our commitment, we have protected our waterways with filter strips consisting of over 75 acres. This complements the 10 acre wetland we established over 12 years ago. For the past six years, on a quarterly basis, we have water samples independently collected and tested to confirm our facilities are not producing any contaminated runoff. We sample from streams (at our property line) as they enter the farm and at the outflow where they leave our property. Those test results are all included herein.

Date Issued: 3/16/2006  
Date of Expiration: 1/18/2009

STATE OF ILLINOIS

License Number: LM 0856354  
Type: 1000 or more A.U.



DEPARTMENT OF AGRICULTURE

**Certified Livestock Manager Certificate**

This is to certify that the person whose name appears on this certificate has complied with Section 30 of the Illinois Livestock Management Facilities Act, 510 ILCS 77/30, and/or rules and regulations adopted there under and is therefore certified as a livestock management facility manager. Therefore said person is granted certification as specified herein until the date of expiration unless and until otherwise suspended, revoked or modified as provided in the act cited.

(b) (6)

(b) (6)

Director,  
Illinois Department of Agriculture

Bureau Chief  
Bureau of Environmental Programs

Date Issued: 3/16/2006  
Date of Expiration: 1/18/2009

STATE OF ILLINOIS

License Number: LM 0856396  
Type: 1000 or more A.U.



DEPARTMENT OF AGRICULTURE

**Certified Livestock Manager Certificate**

This is to certify that the person whose name appears on this certificate has complied with Section 30 of the Illinois Livestock Management Facilities Act, 510 ILCS 77/30, and/or rules and regulations adopted there under and is therefore certified as a livestock management facility manager. Therefore said person is granted certification as specified herein until the date of expiration unless and until otherwise suspended, revoked or modified as provided in the act cited.

(b) (6)

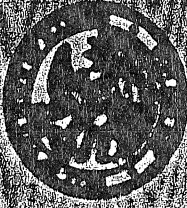
(b) (6)

Director,  
Illinois Department of Agriculture

Bureau Chief  
Bureau of Environmental Programs

Date Issued: 3/14/2006  
Date of Expiration: 1/12/2009

STATE OF ILLINOIS



License Number: LM 0056327  
Type: 1000 or more A.U.

## DEPARTMENT OF AGRICULTURE

### Certified Livestock Manager Certificate

This is to certify that the person whose name appears on this certificate has complied with Section 30 of the Illinois Livestock Management Facilities Act, 510 ILCS 77/30, and/or rules and regulations adopted there under and is therefore certified as a livestock management facility manager. Therefore said person is granted certification as specified herein until the date of expiration unless and until otherwise suspended, revoked or modified as provided in the act cited.

(b) (6)

*Charles F. Clark*  
Director,  
Illinois Department of Agriculture

*John D. Gabel*  
Bureau Chief,  
Bureau of Environmental Program

## General Facility Information

Form 2-A

### Owner/Company Information

Name: (b) (6) COLD SPRINGS FARM

Address: (b) (6)

City: (b) (6)

State: (b) (6)

Zip: (b) (6)

(b) (6)

Ownership status: ☐ Federal: ☐ State: ☐ Public: ☒ Private

### Manager/Operator Information

Name: (b) (6)

Address: (b) (6)

(b) (6)

City: (b) (6)

State: (b) (6)

Zip: (b) (6)

Phone: (b) (6)

### Facility Information

Address: (b) (6)

Plat location:

Directions from nearest post office (also include latitude/longitude of entrance to the production area):

See attached sheet for directions & map

Longitude: 90 degrees, 21 minutes west & Latitude: 42 degrees, 15 minutes, 42 seconds north

Phone: (b) (6)

Emergency contact: (b) (6)

**State and federal manure plan certifications:** Include in your plan 3-ring binder your copies of the Certified Livestock Manager certification for any employees so certified, NPDES permit, and any other permits or certifications.

Identify here who wrote the manure management plan and does the annual updates.

(b) (6)

If someone certified wrote the plan, attach copy of the certification, and identify the agency that provided the certification.

## Annual Update Checklist

(Checklist of changes that *may* need to be made during the end of year reconciliation on each field's nutrient management plan.)

☒ Acres minus setback.

☒ Year of plan \*

### If new soil test data:

☐ Soil test date   ☐ pH   ☐ P1   ☐ K

☒ **Manure sample analysis.** *We want this to only affect the last plan year prior to reconciliation, and those years following. Not the years before. The assumption is that the manure sample in prior years was good but the plan year sample was/may not have been available until after the manure was applied.*

☒ Years 2 thru 4:

- a. **Crop**—Crop rotation may change for any of a number reasons.
- b. **Yield**—Actual crop yield will almost certainly be different from expected yield, which is a five year rolling average minus disaster years plus a small percent genetic increase.
- c. **Season**—Actual season of application may change or it may be split between spring/fall.
- d. **Application rate**—Actual rate will almost certainly be different from the planned, and could affect the plan for subsequent years.
- e. **Mineralization factor**—This probably won't change but it could, depending on the manure source.
- f. **NH<sub>4</sub>-N application loss**—This would probably only change if the application method and/or manure source changes.
- g. **Other legume credits**—Needs to be accounted for.
- h. **Incidental N**—Same as g.
- i. **Incidental P**—Same as g.
- j. **Incidental K**—Same as g.
- k. **Lime\*\*** For records only.

\*Always changes

\*\* Not yet incorporated on spreadsheet. Informational only.

# ANIMAL UNITS WORKSHEET

Species	Production Phase	Facility Design Capacity	Multiplier	Subtotals
Dairy	milk cows		x 1.4	0
	heifers, calves		x 0.6	0
Beef	feeder, cows	2800	x 1.0	2800
Swine	pigs under 55 lb		x 0.03	0
				0
	pigs over 55 lb		x 0.4	0
				0
				0
Turkeys			x 0.02	0
Laying hens or broilers			x 0.03	0
Ducks			x 0.02	0
Horses			x 2.0	0
Sheep, lambs, goats			x 0.1	0
				0
Total				2800

## Cold Springs Farm

Cold Springs Farm is a 1225 acre farm in rural Jo Daviess County. Access to the farm can be from either Black Jack Rd at Irwin Rd. (42°, 17', 22" North & 90°, 19', 50" West) or W. Blanding Rd. (42°, 15', 42" North & 90°, 21' West). The Legal Description, Parcel Numbers & acreage are as follows:

Parcel Number	Description	Acreage
09-000-001-03	S1 T26 R1E PT E 1/2 NW PT NE 7 PT SE	203.65
09-000-007-00	S1 T26 R1E E 1/2 SW SW SE	121.50
09-000-007-03	S1 T26 R1E W 1/2 NW W 1/2 SW	160.00
09-000-013-00	S2 T26N R1E E 1/2 SE & E 1/2 NE	161.00
09-000-048-00	S12 T26 R1E E 1/2 NW, NE & NW SE	279.07
09-000-048-03	S12 T26N R1E W 1/2 NW	80.00
09-000-052-00	S12 T26 R1E NE SW & PT NW SW	62.55
09-000-128-00	S7 T26 R2E E 1/2 NW & PT W 1/2 NW	157.30
TOTALS		1,225.07

# **EMERGENCY RESPONSE PLANNING**

## **COLD SPRINGS FARM**

### **FARM DIRECTIONS & MAP**

---

#### **FROM HANOVER (Route 1):**

At the Apple River bridge on Highway 84, go west on Fulton Rd. Go about ½ mile where road will fork; stay to the right on W. Blanding Rd towards Blanding Landing. Go about 4 miles on W. Blanding and Cold Springs Farm entrance is clearly marked with EMS 6636 signage.

#### **FROM HANOVER (Route 2):**

About 2 blocks north of the Apple River bridge on Highway 84, go northwest on South Blackjack Rd (towards Chestnut Mountain Resort). In about 3 miles, Sawmill Rd. will intersect Blackjack from the right. Proceed ¼ mile and turn left on Irwin Rd. This will bring you in to Cold Springs Farm from the North.

#### **FROM ELIZABETH:**

Proceed west on Rt. 20 out of Elizabeth and go about 1-1/2 miles. Turn left on Highway 84 (towards Hanover). In 2 miles, turn right on Sawmill Rd. Sawmill will dead end at Blackjack Rd. Turn right and go ¼ mile. Turn left on Irwin Rd. This will bring you in to Cold Springs Farm from the North.

#### **FROM GALENA:**

Proceed east out of Galena on Rt. 20. About 1/3 mile east of the Galena River bridge, turn right on N. Blackjack Rd. Follow N. Blackjack about 17 miles. Turn right on Irwin Rd. This will bring you in to Cold Springs Farm from the North.

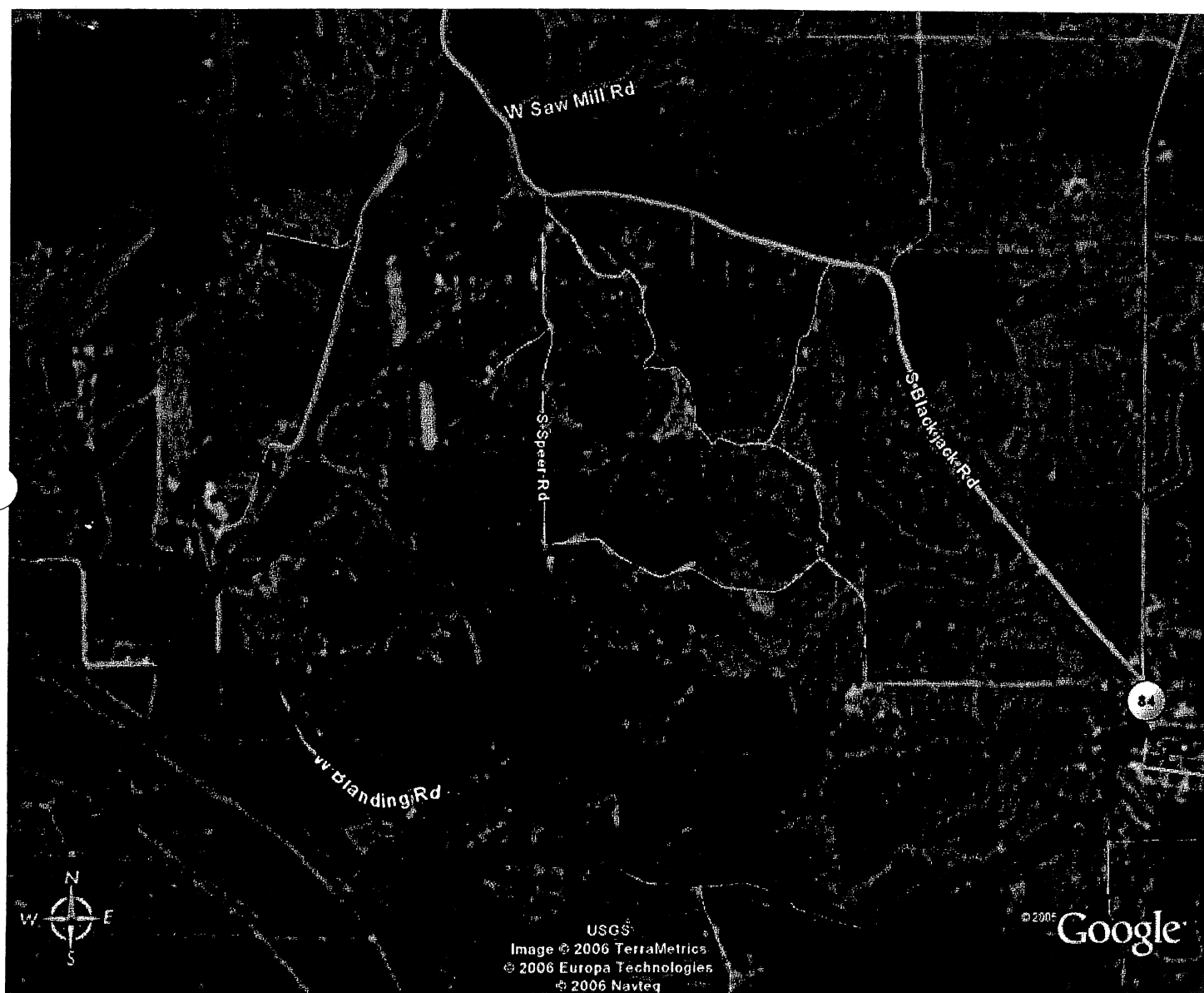
**SEE FOLLOWING PAGE FOR MAP**

(b) (6)

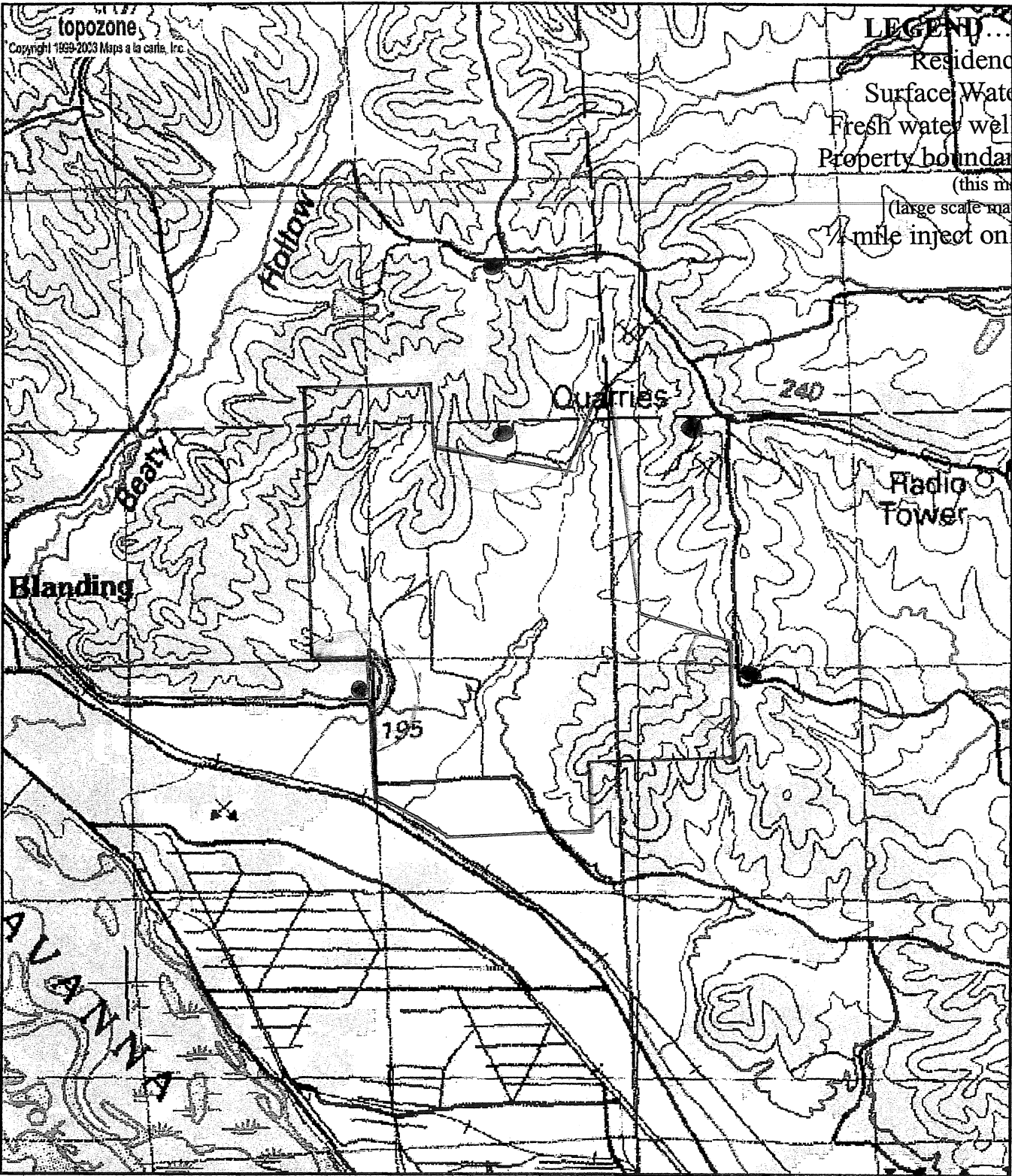


FROM HANOVER (Route 1):

At the Apple River bridge on Highway 84, go west on Fulton Rd. Go about ½ mile where road will fork; stay to the right on W. Blanding Rd towards Blanding Landing. Go about 4 miles on W. Blanding and Cold Springs Farm entrance is clearly marked with EMS 6636 signage.



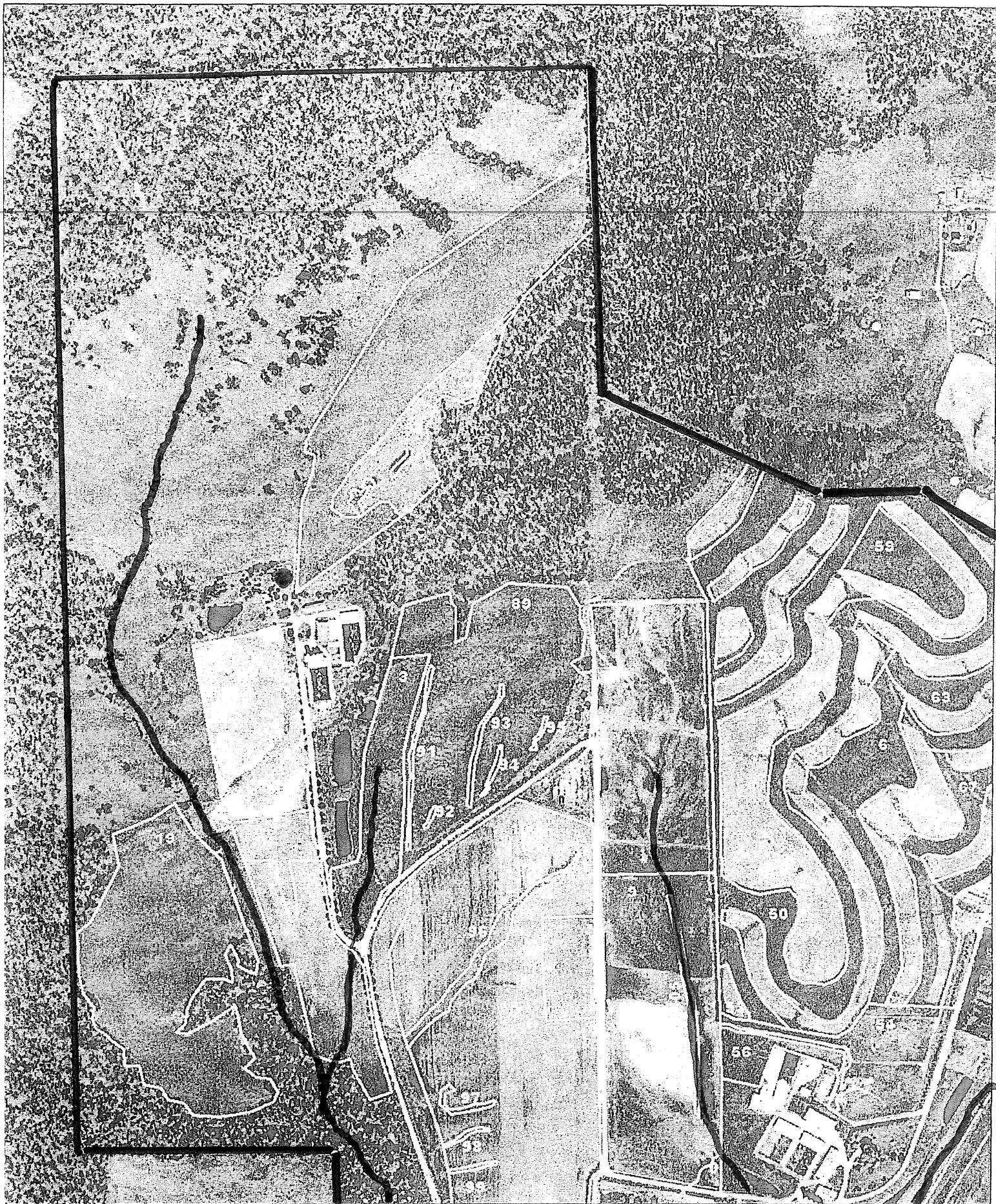
example of maps  
included -  
(but much clearer)



0 0.6 1.2 1.8 2.4 3 km  
0 0.4 0.8 1.2 1.6 2 mi

UTM 15 719100E 4683317N (NAD27)  
**USGS Hanover (IL) Quadrangle**  
Projection is UTM Zone 15 NAD83 Datum

↑  
G  
M=-0.755  
G=1.788



Tract 4316  
Farm 4047  
NOT TO SCALE

0.06 0 0.06 0.12 0.18 0.24 Miles





Tract 4316  
Farm 4047  
NOT TO SCALE

0.06 0 0.06 0.12 0.18 0.24 Miles



Map Printed: Jun 13, 2005



Tract 4316  
Farm 4047  
NOT TO SCALE



Tract 4316  
Farm 4047  
NOT TO SCALE

0.06 0 0.06 0.12 0.18 0.24 Miles



Map Printed: Jun 13, 2005

## Cold Springs Farm

### Fields Available and Intended For Livestock Waste Application

---

Fields available for livestock waste application and acreage are:

<u>Field #</u>	<u>Acreage</u>
1	19.26
20	6.94
19	20.45
89	20.69
50	23.9
59	3.75
6	6.7
63	3.93
67	11.69
41	6.45
43	2.94
30	3.13
32	3.71
34	3.22
24	23.67
12	40.78
16	14.59

---

215.80

# Facility Working and Design Capacity

Form 3-A

Building(s) or feedlot name: COLD SPRINGS FARM

Animal numbers (design capacity of building or feedlot) "fill in blanks." (Animal stage of production and average animal size, pounds, and number of animals).

Column A	Column B	Column C	Column D	Column E	Column F	Column G
Days in Use/Year	Species	Stage of Production	Average Weight	<input type="checkbox"/> 12/31 inventory <input type="checkbox"/> ___/___ inventory (mm/dd) <input checked="" type="checkbox"/> Average Inventory	Max. # Inventory (or % variation from average)	CNMP*** Animal Units (Column D x E / 1,000 lb.)
365	Beef	VARIOUS	825	2800	3150	2310
	Dairy	Mature				
	Dairy	Heifers				
	Veal Calves					
	Turkeys					
	Chicken	Broilers				
	Chicken	Layers				
	Swine	Sows/gestation*				
	Swine	Unweaned pigs**				
	Swine	Nursery**				
	Swine	Boars/culls*				
	Swine	Finisher*				
	Horses					
	Other					

\* pigs over 55 lbs. \*\* pigs under 55 lbs CNMP\*\*\* Comprehensive Nutrient Management Plan

Species	Production Phase	Multiplier	Design Capacity	Total Animal Units
Dairy	Milking dairy cows	x 1.4		
	Young dairy calves	x 0.6		
Beef	Brood cows, slaughter and feeder cattle	x 1.0	2800	2800
Swine	Pigs under 55 lbs	x 0.03		
	Pigs over 55 lbs	x 0.4		
Turkeys		x 0.02		
Laying hens or broilers - (other manure handling systems)		x 0.005		
Laying hens or broilers (continuous overflow watering)		x 0.01		
Laying hens or broilers (liquid manure handling system)		x 0.03		

# Storm Water Pollution Prevention Plan

Form 3-B





Y	N	NA	Map Legend*	Physical Structures
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3B-1	<b>Collection basins</b> —Permanent structures in which large spills or contaminated storm water is contained and stored before cleanup or treatment. Collection basins are designed to receive spills, leaks, etc., and to prevent pollutants from being released into the environment. Collection basins can receive and contain materials from many locations across a facility.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3B-2	<b>Curbing</b> —A barrier that surrounds an area of concern. Unlike diking, curbing is unable to contain large spills and is usually implemented on a small-scale basis. However, curbing is common at many facilities and in small areas where liquids are handled and transferred.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3B-3	<b>Containment diking</b> —Containment dikes are temporary or permanent earth or concrete berms or retaining walls that are designed to hold spills. Diking can be used at any facility, but is most common for controlling large spills or releases from liquid storage and transfer areas. Diking can provide one of the best protective measures against the contamination of storm water because it surrounds the area of concern and keeps spilled materials separated from the storm water outside of the diked area.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3B-4	<b>Diversions</b> —A diversion is a channel constructed across the slope, generally with a supporting ridge on the lower side, for the purpose of changing the direction of flow of storm water.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3B-5	<b>Dry extended detention ponds</b> —Dry extended detention ponds (a.k.a. dry ponds, extended detention basins, detention ponds, extended detention ponds) are basins whose outlets have been designed to detain the storm water runoff from a water quality design storm for some minimum time (e.g., 24 hours) to allow particles and associated pollutants to settle. Unlike wet ponds, these facilities do not have a large permanent pool. However, they are often designed with small pools at the inlet and outlet of the basin. They can also be used to provide flood control by including additional flood detention storage.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3B-6	<b>Wet ponds</b> —Wet ponds (a.k.a. storm water ponds, retention ponds, wet extended detention ponds) are constructed basins that have a permanent pool of water throughout the year (or at least throughout the wet season). Ponds treat incoming storm water runoff by settling and algal uptake. The primary removal mechanism is settling as storm water runoff resides in this pool, and pollutant uptake, particularly of nutrients, also occurs through biological activity in the pond.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3B-7	<b>Infiltration basin</b> —An infiltration basin is a shallow impoundment that is designed to infiltrate storm water into the ground water. This practice is believed to have a high pollutant removal efficiency and can help recharge the ground water, thus restoring low flows to stream systems.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3B-8	<b>Infiltration trench</b> —An infiltration trench (a.k.a. infiltration galley) is a rock-filled trench with no outlet that receives storm water runoff. Storm water runoff passes through some combination of pretreatment measures, such as a swale and detention basin, and into the trench. There, runoff is stored in the void space between the stones and infiltrates through the bottom and into the soil matrix. The primary pollutant removal mechanism of this practice is filtering through the soil.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3B-9	<b>Storm water wetland</b> —Storm water wetlands (a.k.a. constructed wetlands) are structural practices similar to wet ponds that incorporate wetland plants into the design. As storm water runoff flows through the wetland, pollutant removal is achieved through settling and biological uptake within the practice. Storm water wetlands are designed specifically for the purpose of treating storm water runoff, and typically have less biodiversity than natural wetlands in terms of both plant and animal life.

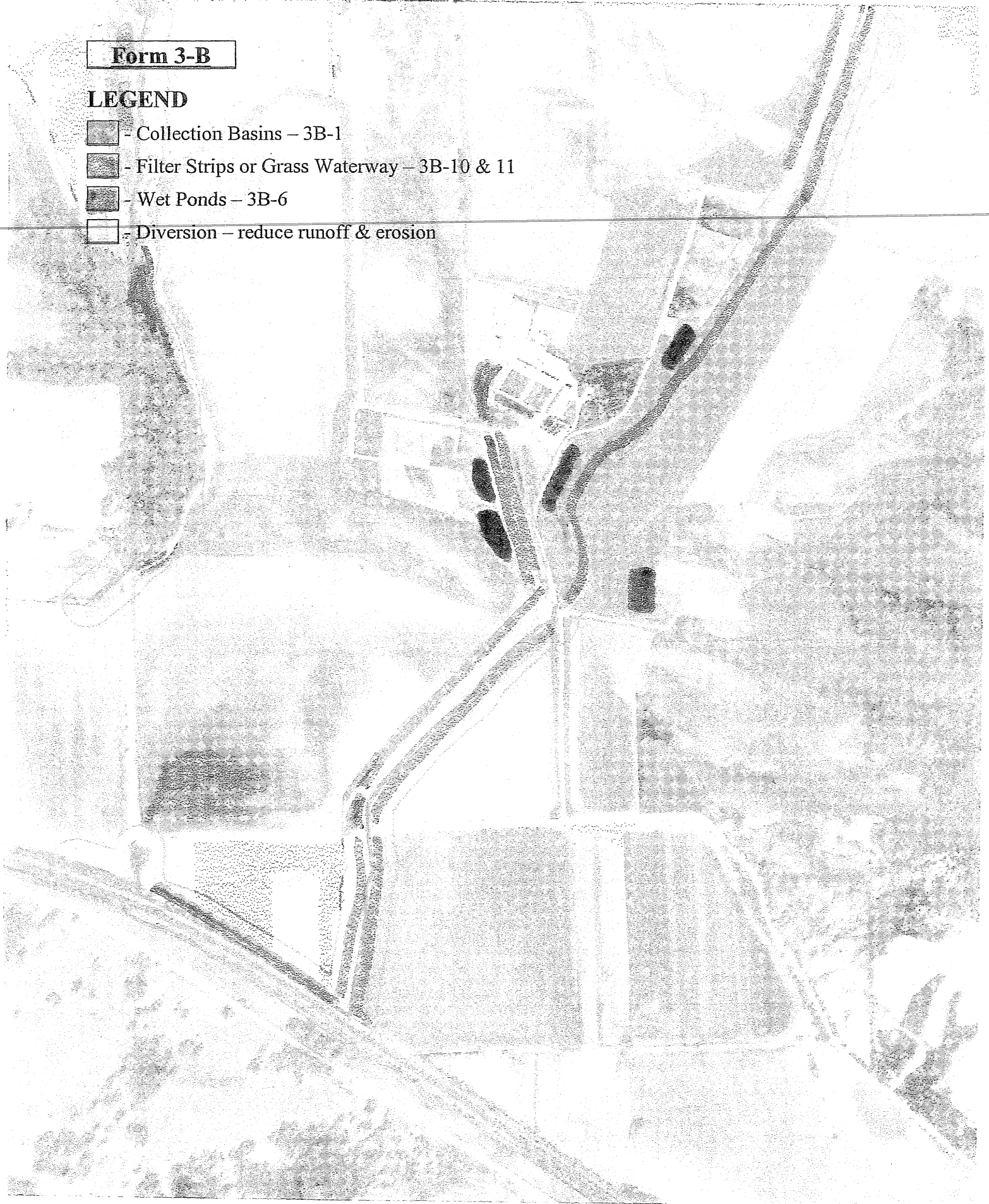
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3B-10	<b>Grassed waterways/swales</b> —A series of vegetated, open channel management practices designed specifically to treat and attenuate storm water runoff for a specified water quality volume. As storm water runoff flows through these channels, it is treated through filtering by the vegetation in the channel, filtering through a subsoil matrix, and/or infiltration into the underlying soils. Variations of the grassed swale include the grassed channel, dry swale, and wet swale.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3B-11	<b>Grassed filter strip</b> —Grassed filter strips (vegetated filter strips, filter strips, and grassed filters) are vegetated surfaces that are designed to treat sheet flow from adjacent surfaces. Filter strips function by slowing runoff velocities and filtering out sediment and other pollutants, and by providing some infiltration into underlying soils.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3B-12	<b>Catch basin</b> —A catch basin (a.k.a. storm drain inlet, curb inlet) is an inlet to the storm drain system that typically includes a grate or curb inlet and a sump to capture sediment, debris, and associated pollutants. They are also used in combined sewer overflow (CSO) watersheds to capture floatables and settle some solids. Catch basins act as pretreatment for other treatment practices by capturing large sediments.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3B-13	<b>In-line storage</b> —In-line storage refers to a number of practices designed to use the storage within the storm drain system to detain flows. Storage is achieved by placing devices in the storm drain system to restrict the rate of flow. Devices can slow the rate of flow by backing up flow, as in the case of a dam or weir, or through the use of vortex valves, devices that reduce flow rates by creating a helical flow path in the structure.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3B-14	<b>Other practices</b>

\* Mark the map legend codes on facility/production area maps where appropriate.

**Form 3-B**





**LEGEND**

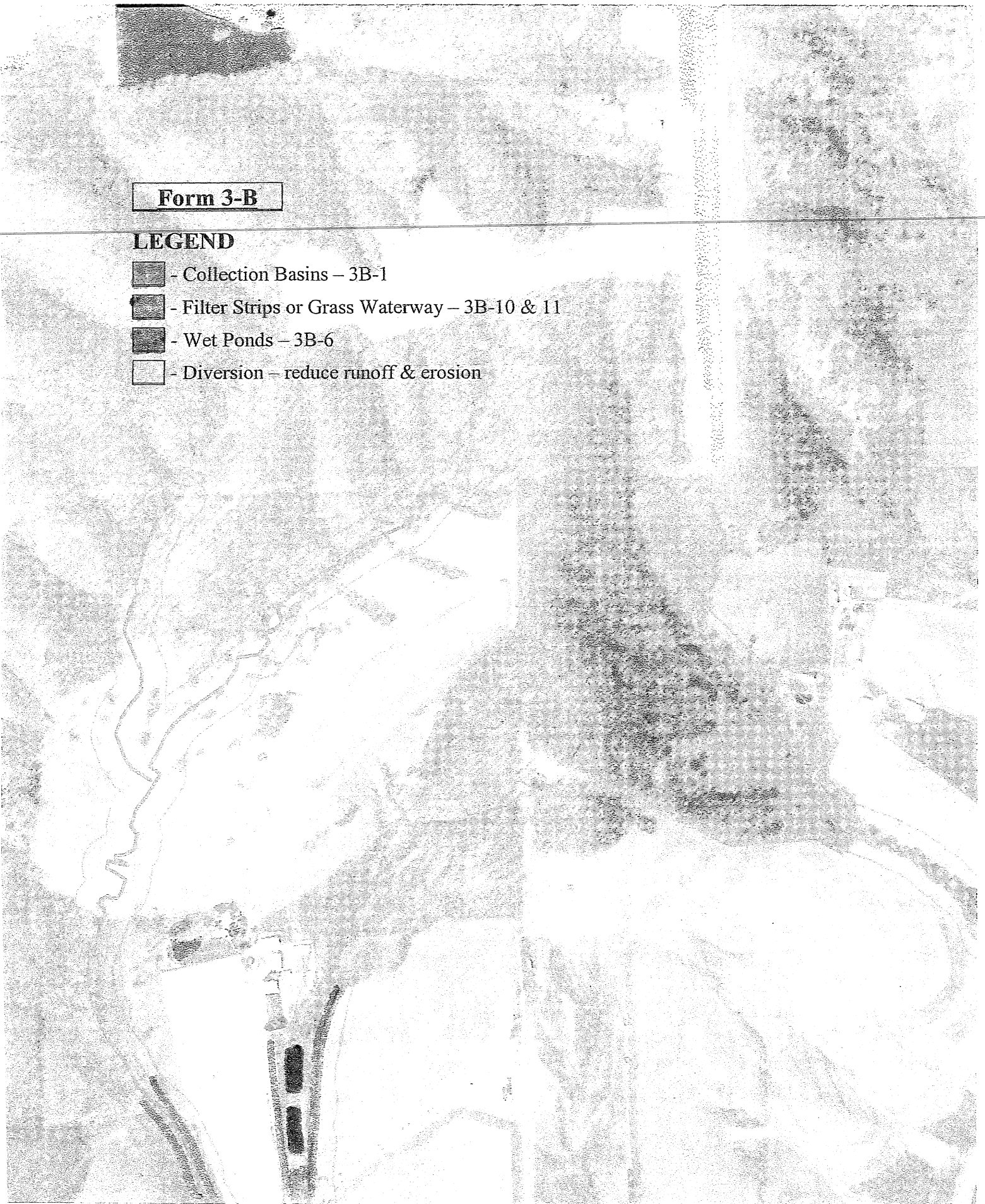
-  - Collection Basins – 3B-1
-  - Filter Strips or Grass Waterway – 3B-10 & 11
-  - Wet Ponds – 3B-6
-  - Diversion – reduce runoff & erosion



**Form 3-B**





**LEGEND**

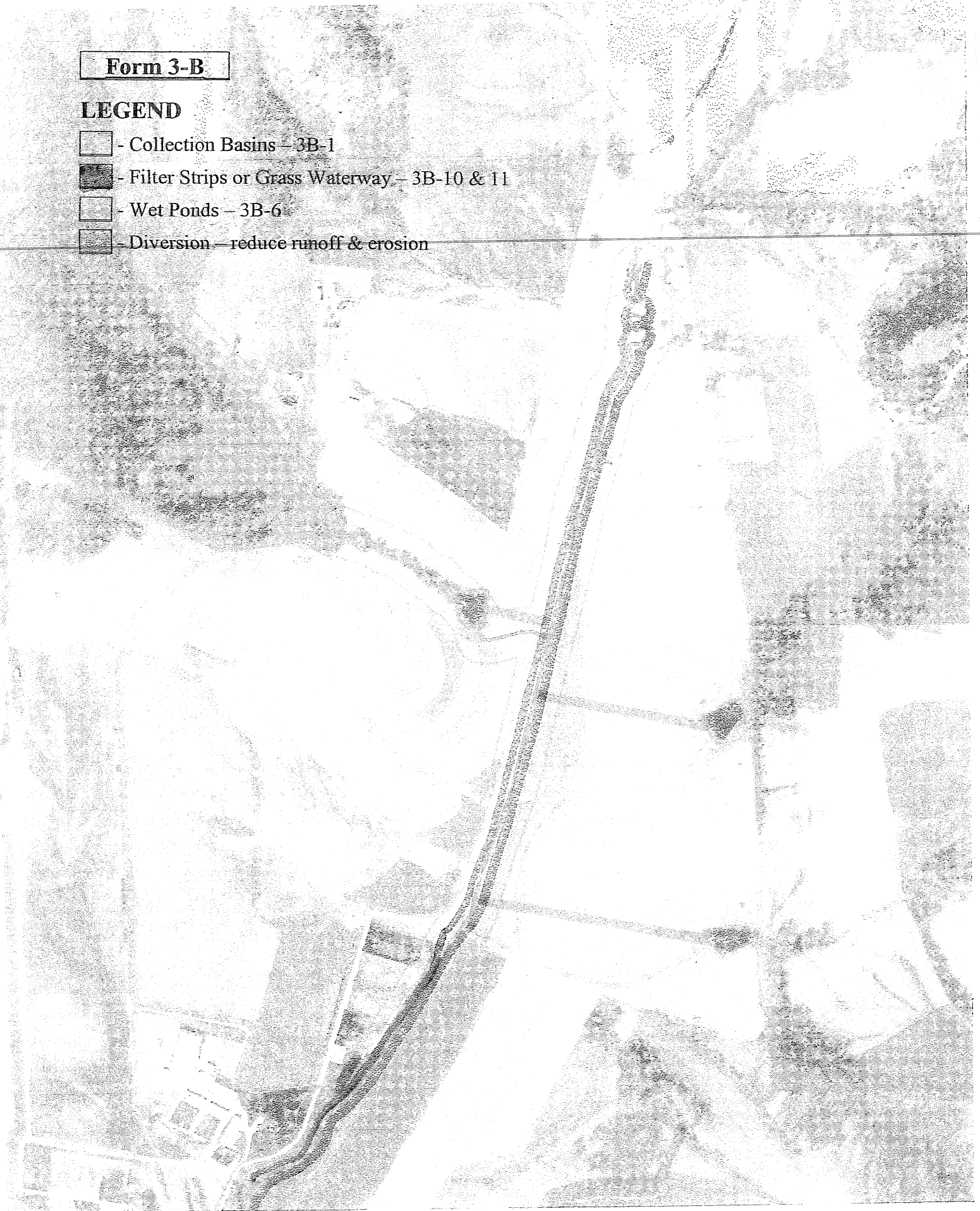
-  - Collection Basins – 3B-1
-  - Filter Strips or Grass Waterway – 3B-10 & 11
-  - Wet Ponds – 3B-6
-  - Diversion – reduce runoff & erosion



**Form 3-B**

**LEGEND**

-  - Collection Basins - 3B-1
-  - Filter Strips or Grass Waterway - 3B-10 & 11
-  - Wet Ponds - 3B-6
-  - Diversion - reduce runoff & erosion



(b) (6)

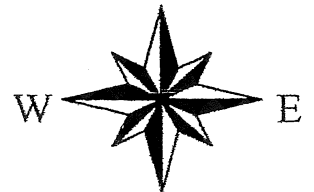
# CRP Filter Strips



(b) (6)

316-fs-fx.shp  
316-fs-120-237.shp  
swp.shp  
reeks.shp

Scale 1:14400  
1"=1200'



*Tract 4316*  
*Farm 4047*  
*not to scale*

200 0 200 400 600 800 Feet

A horizontal scale bar with alternating black and white segments, corresponding to the numerical markings above it.

*Map Printed: Jan 31, 2006*

*Tract 4316*  
*Farm 4047*  
*not to scale*


200 0 200 400 600 800 Feet

A horizontal scale bar with alternating black and white segments, corresponding to the numerical markings above it.

*Map Printed: Jan 19, 2006*

*Tract 4316*  
*Farm 4047*  
*not to scale*

200 0 200 400 600 800 Feet

A horizontal scale bar with alternating black and white segments, corresponding to the numerical values 200, 0, 200, 400, 600, and 800.

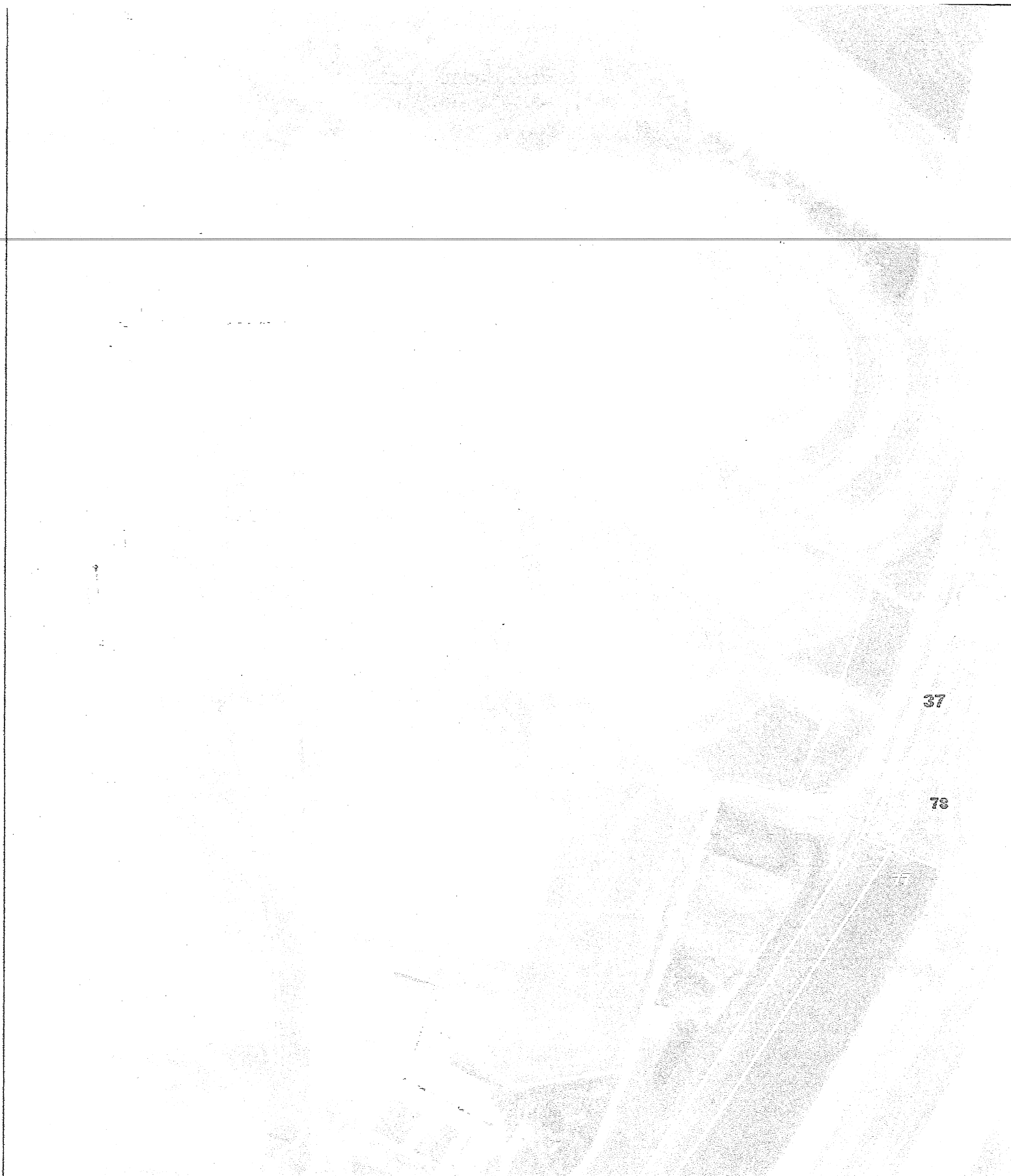
*Map Printed: Jun 19, 2006*

*Tract 4316*  
*Farm 4047*  
*not to scale*

200 0 200 400 600 800 Feet

A horizontal scale bar with alternating black and white segments, corresponding to the numerical markings above it.

*Map Printed: Jan 19, 2006*



*Tract 4316*  
*Farm 4047*  
*not to scale*



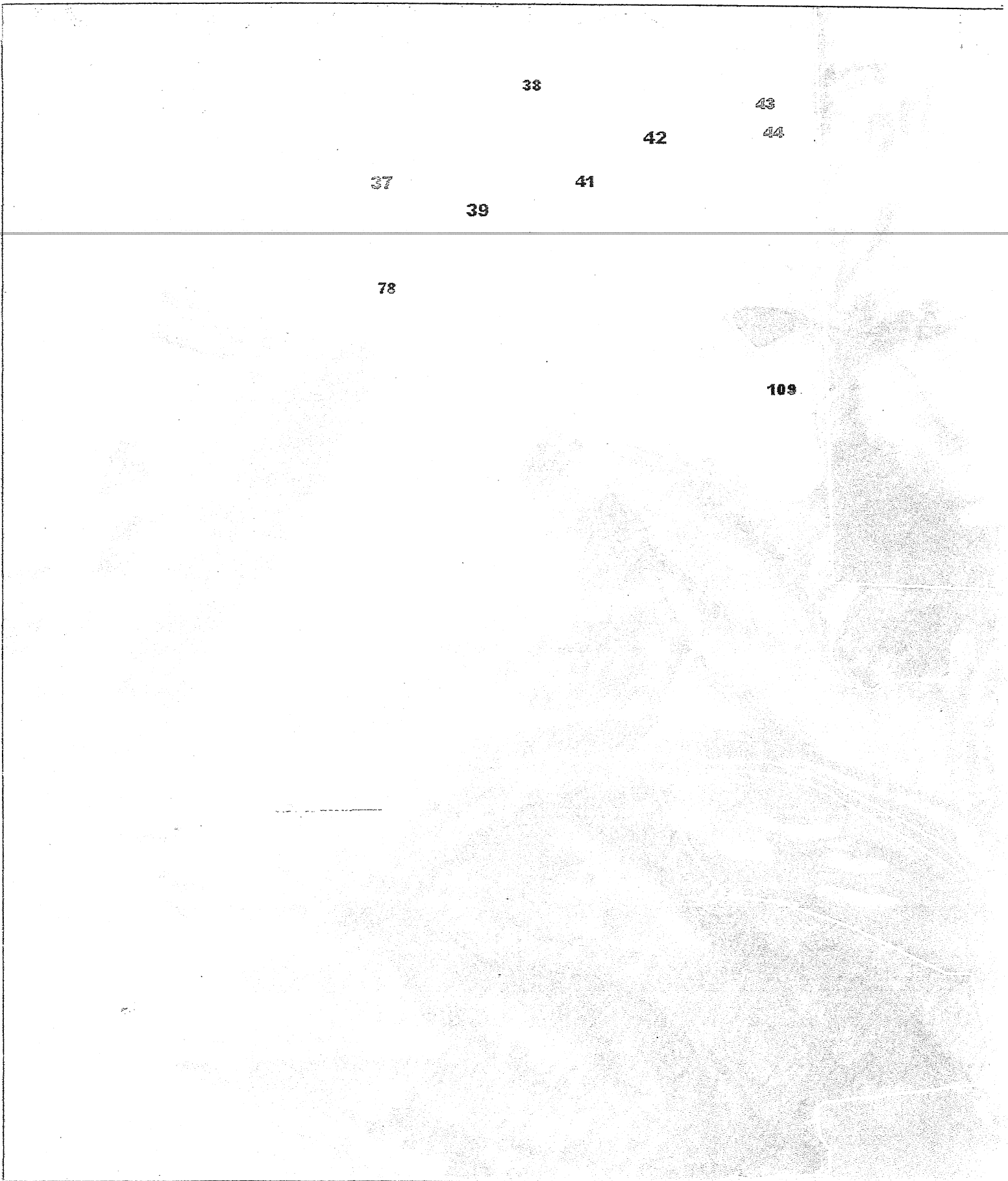
*Map Printed: Jan 19, 2006*

30  
38  
43  
42  
44  
37  
41  
39  
78  
109

Tract 4316  
Farm 4047  
not to scale



Map Printed: Jan 19, 2006



Tract 4316  
Farm 4047  
not to scale

200 0 200 400 600 800 Feet



Map Printed: Jan 19, 2006

# Facility/Production Area Storm Water Pollution Prevention Plan

Form 3-C

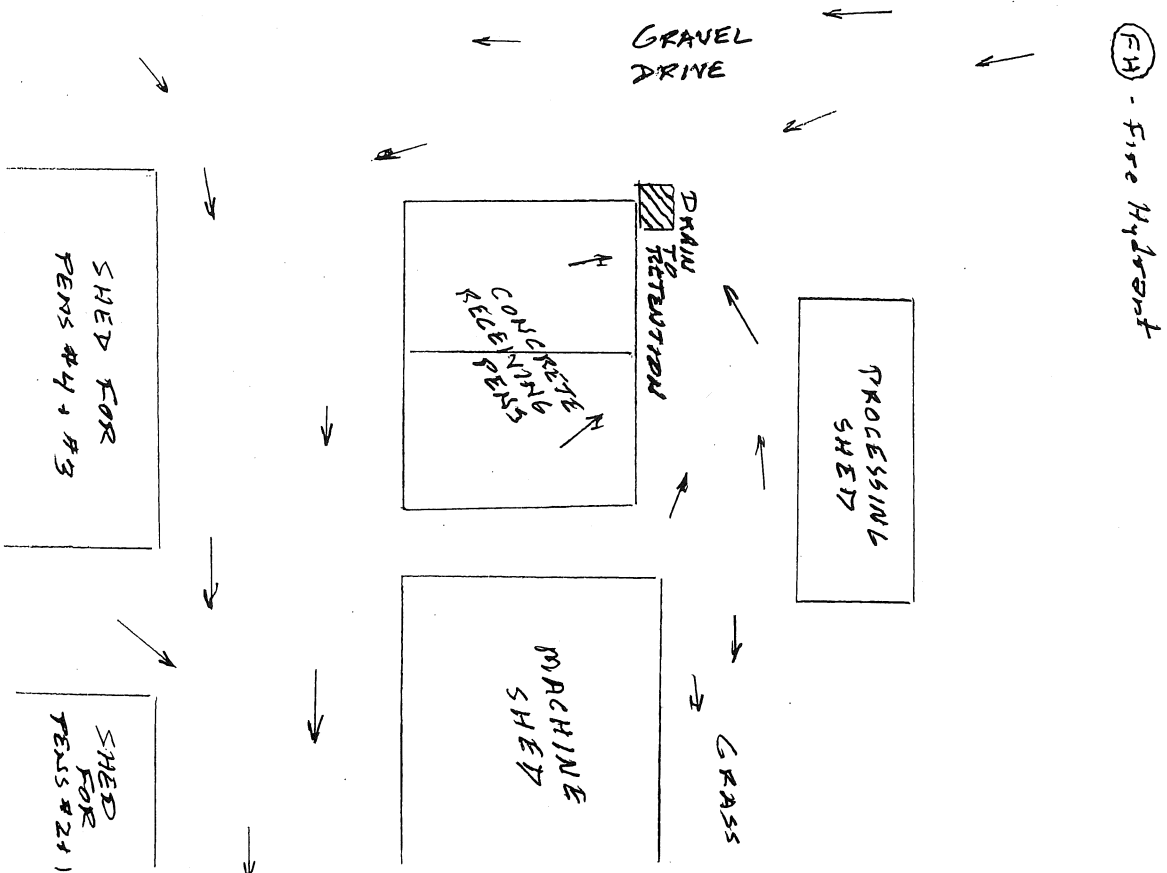
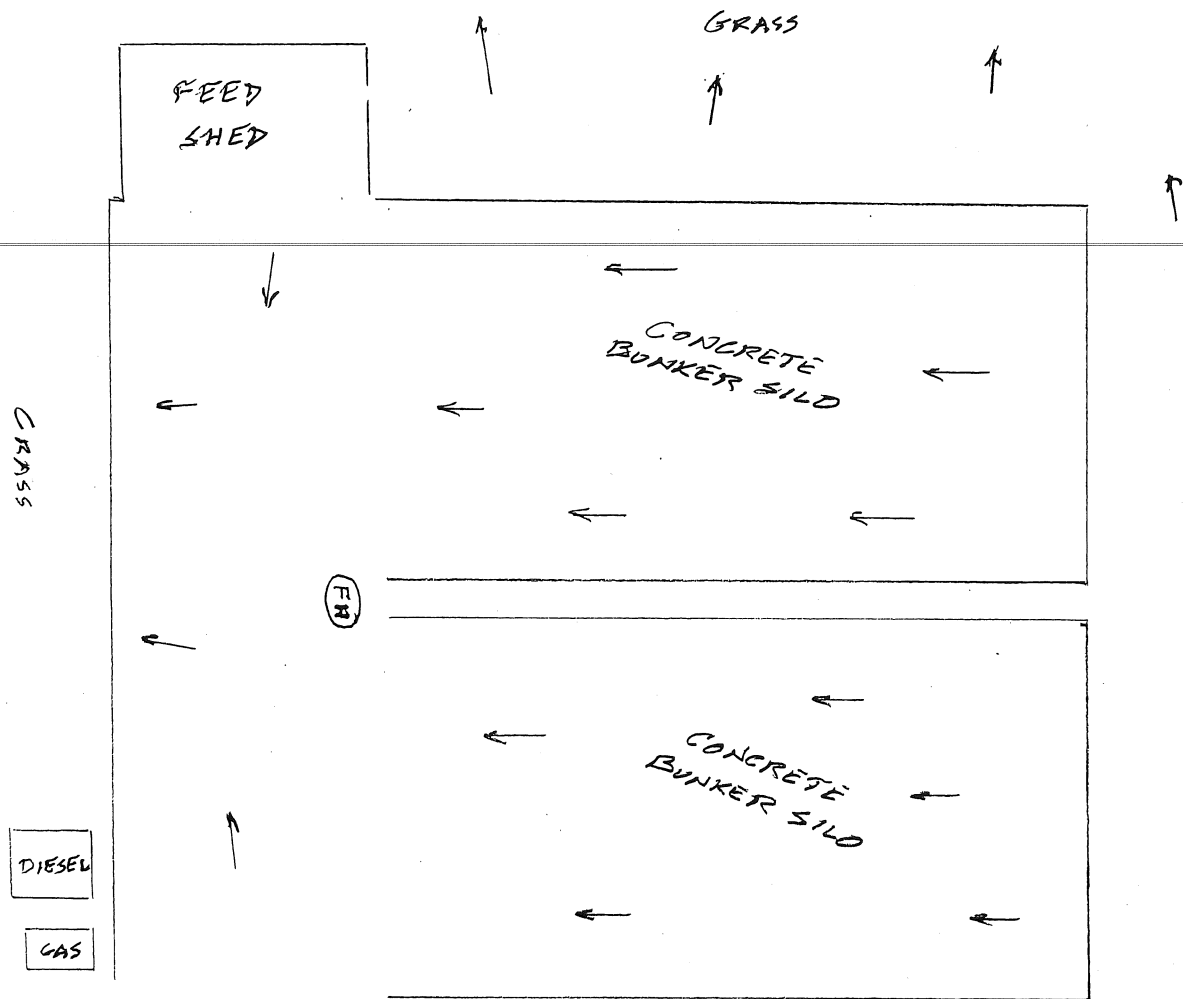
Mark those BMP's listed below that are applicable to any part of your operation.

Y	N	NA	Map Legend	Management/Operational Practices
				<b>Diversions (Terrace-like structures can also function as diversions.)</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Temporary diversions are used only where the drainage area is less than 5 acres.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Diversions that are part of a pollution abatement system have a minimum capacity for the peak discharge from a 10-year frequency, 24-hour duration storm.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Diversions designed to protect areas such as buildings, roads, and animal waste management systems have a minimum capacity for the peak discharge from a storm frequency consistent with the hazard involved but not less than a 25-year frequency, 24-hour duration storm. Freeboard is not less than 0.3 ft.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		The location of a diversion and outlet is in compliance with applicable state drainage and water conveyance laws.** Diversions do not outlet on public roads, highways, or other public utility, or the written approval of the appropriate authorities has been obtained.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Where movement of sediment into the channel can be a problem, the design includes extra capacity for sediment or periodic removal; and where applicable, such sediment removal is outlined in the operation and maintenance plan.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		The outlet conveys runoff to a point where outflow will not cause damage.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Periodic inspections, especially immediately following significant storms, are performed. Damaged components of the diversion are promptly repaired or replaced as necessary.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Diversion capacity, ridge height, and outlet elevations are maintained, especially where high sediment yielding areas are in the drainage area above the diversion.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Each inlet for underground outlets is kept clean and sediment buildup redistributed so that the inlet is at the lowest point.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Sediment is redistributed as necessary to maintain the capacity of the diversion.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Vegetation on diversions is maintained and trees and brush controlled by hand, chemical and/or mechanical means.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Machinery is kept away from steep sloped ridges. Equipment operators are informed of all potential hazards.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3C-1	<b>Hazardous materials storage</b> —Proper storage of hazardous materials. Practices such as covering hazardous materials, or even storing them properly, can have dramatic impacts.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3C-2	<b>Fueling areas</b> —Absorbent used for fueling areas will be packaged in small bags for convenient use and small drums will be available for storage. Absorbent materials will not be washed down the floor drain or into the storm sewer.

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3C-3	<b>Chemical spills</b> —Emergency spill containment and cleanup kits will be located at the facility site. The contents of the kit will be appropriate to the type and quantities of chemical or goods stored at the facility.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3C-4	<b>Other practices</b> (describe)

\*\* See Illinois Drainage Law Part 1 on the Workbook CD for details on landowner rights and responsibilities regarding drainage.

Diversion - NRCS Practice Standard Code 362, Roof Runoff Structure - NRCS Practice Standard Code 558



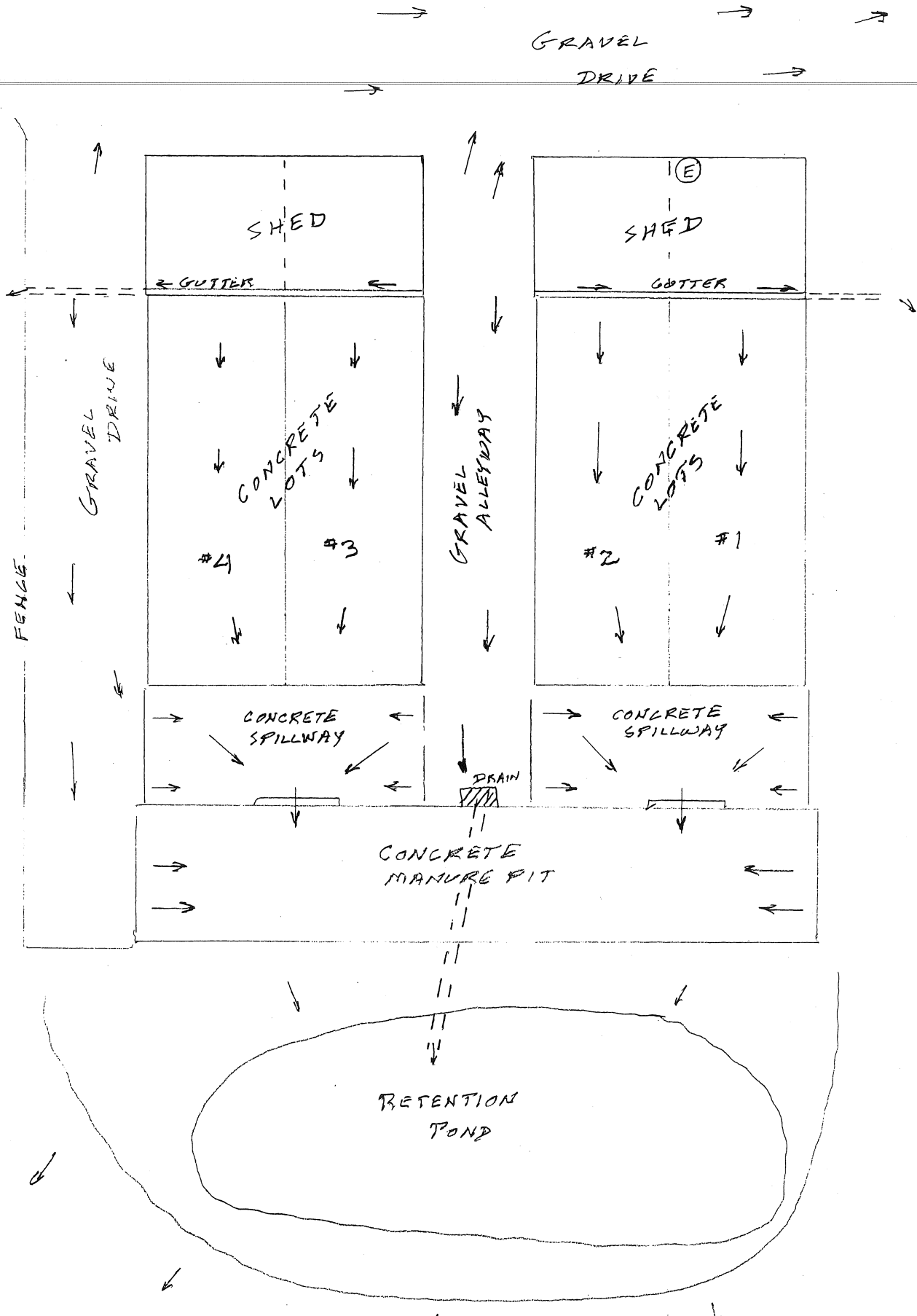
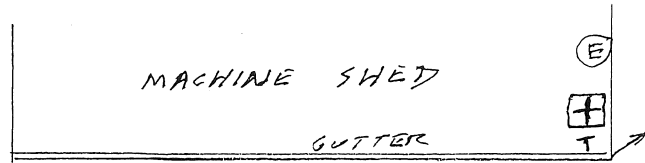
(E) - ELECTRIC PANEL

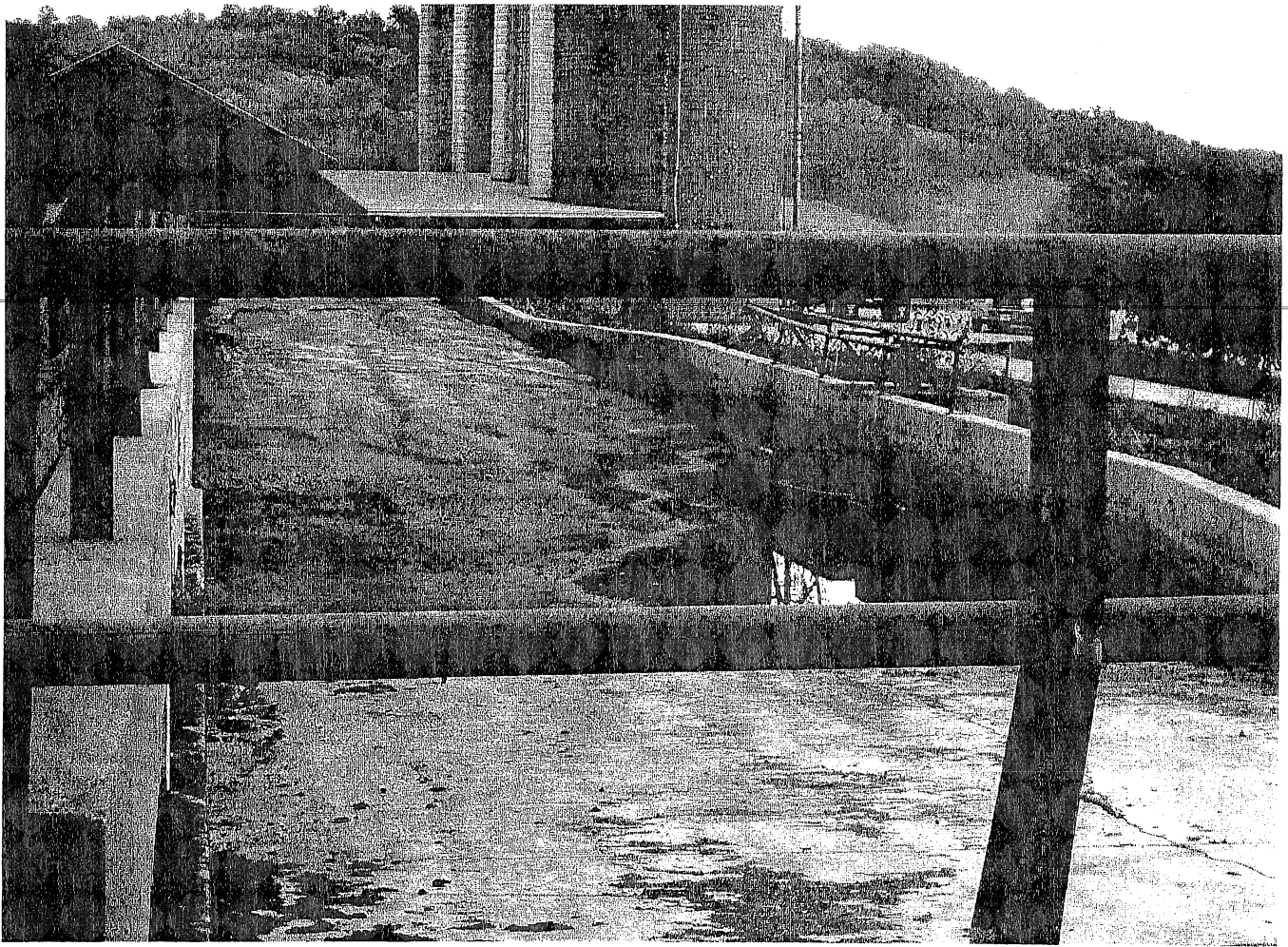
T - TELEPHONE

⊕ - FIRST AID

→ WATER DIRECTION

=== SUB SURFACE





This photograph shows the concrete holding pit that is below Pens #1, #2, #3 & #4. It has a capacity of over 100,000 gallons. Beneath this pit is an evaporation pond with a 750,000 gallon capacity to collect any overflow. Our management practice is to keep this pit clean. A similar pit and pair of evaporation ponds is below pens #5, #6, #8 & #9. A newly acquired lagoon pump/agitator with a 6" discharge (3,000 gallons/min) allows both pits to be emptied in less than one day.



This is a photograph of the concrete pens #3 & #4 and the sheds for pens #1, #2, #3 & #4. The open areas of these pens are 55' wide x 145' long (approx 1/6 acre each). They have a 2° slope to the south and runoff flows (on concrete) into the concrete pit shown on the following photograph. They are bedded with sawdust, woodchips or corn stalks and the bedding pack is maintained and manure removed weekly.

# Appendix C

## Illinois Normal Monthly Precipitation For Galena, IL-10C-32-36—1971-2000

### Step 4

#### Historical Climate Data Precipitation Summary

1971-2000 NCDC  
Normals

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
GALENA	1.28	1.47	2.46	3.48	3.99	4.73	3.75	4.20	3.81	2.31	2.76	1.85	36.09

Galena is the nearest location (12 miles) with this recorded history

# Appendix D

## Illinois County 100-yr, 24-hr or 25-yr, 24-hr Rainfall Events

### Step 4

#### Illinois County Precipitation Events

<u>County</u>	<u>1-year</u>	<u>2 year</u>	<u>5 year</u>	<u>10 year</u>	<u>25 year</u>	<u>50 year</u>	<u>100 year</u>
JoDaviess	2.57	3.11	3.95	4.63	5.60	6.53	7.36

## Mortality Disposal Operations

Form 3-D

- ☒ If a rendering service is used, completely describe how often they pick up, where mortalities are kept until pick up, security, etc. **Use Forms 3-F and 3-G** to record mortalities.

Mortalities are picked up by: 5-Star Stock Removal -

Deads are removed from the pen, kept on a wood chip pile & picked up within 24 hours.

Wood chips are then taken to manure windrows and incorporated into newest compost windrow

- ☐ If mortalities are composted, completely describe (how constructed - dimensions, roof, floor, material used, etc.) composting operation and the facilities operation and maintenance, including daily activities, temperature readings, approximate pounds of mortalities per month, location of compost site, carbon source, recipe, etc. **Use Forms 3-F and 3-G** to record mortalities.

- ☐ If an incinerator is used, provide a complete description of the operation and maintenance of the incinerator, including approximate pounds per month incinerated and location of the incinerator. Also include a copy of the IEPA incinerator approval, etc. **Use Forms 3-F and 3-G** to record mortalities.

- ☐ If burial is used provide a complete description of procedures including location of past and current burial sites (map showing the sites should be included), how many pounds are buried at each site, field drainage, water table, etc. **Use Forms 3-F and 3-G** to record mortalities.

# Mortality Discharge Prevention Best Management Practices

Form 3-E

Mark those BMP's listed below that are applicable to any part of your operation.

Y	N	NA	Map Legend*	Practices
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<b>Location</b> —The facility is down gradient (slope) from all springs and/or wells.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3E-1	<b>Location</b> —The animal mortality facility is located outside the 100-year floodplain.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<b>Location</b> —Due to site restrictions, the facility is within a floodplain, and the facility is protected from inundation or damage.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<b>Location</b> —The facility is located as close to the source of mortality as practical, considering bio-security issues and the need to keep the facility out of sight of the general public.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<b>Liner</b> —Seepage from mortality facilities could create a potential water quality problem, and a clay liner or other acceptable liner technology is used beneath the facility to contain seepage.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3E-2	<b>Freezers</b> —Freezer units are sized to accommodate the normal maximum volume of mortality to be expected in the interval between emptying. Freezer volume includes the expected mortality rate of the animal, the period of time between emptying where mortality is given on a per day basis, the average weight of the animal between emptying, and a conversion factor for weight to volume. Capacity calculations are supported by a removal schedule supplied by an integrator or approved vendor.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3E-3	<b>Incinerators</b> —Incinerator is dual burning Type 4 (human and animal remains) approved for use within the state. Permit for operation (IEPA Bureau of Air) is on file at the site.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<b>Incinerators</b> —Minimum incinerator capacity is based on the average daily weight of animal mortality and the length of time the incinerator will be operated each day.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<b>Incinerators</b> —Incineration ash is properly handled so as not to cause pollution.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<b>Incinerators</b> —Ground under incinerator is managed to prevent storm water runoff, either by berms or containment of that runoff.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<b>Runoff</b> —All mortality areas are managed to prevent storm water runoff, either by using berms or containment of that runoff.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<b>Roofs</b> —Facility has a roof to manage storm water and prevent storm water from entering mortality management area.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<b>Inspection and maintenance</b> —At each operation or use, the animal mortality facility is inspected to note any maintenance needs or indicators of operation problems.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<b>Biosecurity</b> —Biosecurity concerns are addressed in all aspects of planning, installation, and operation and maintenance of the animal mortality facility.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3E-4	<b>Visual screens</b> —Vegetative screens, topography, and buildings are used to shield the animal disposal facility from public view and to minimize visual impact.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3E-5	<b>Safety</b> —Safety devices such as fencing, warning signs, and freezer locks are in place where appropriate.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3E-6	<b>Other (list)</b>

\* Mark the map legend codes on facility/production area maps where appropriate.

(Use a separate sheet for each month)

Month/Year: 2006

[illegible]

\*Composting—include sample information (N, P, and K) if spread on fields.

\*\* Burial Method—include a map showing burial locations and # of pounds buried at each site.

2006 Dead Animal Count								
		CURRENT						
		COUNT						
		22						
		1						
		6						
		29						
Individual Solds			FARM		Under 500 #	Death Cause	OWNER	Weight
			LOCATION					
STRS	HFRS-COWS	MIXED	PEN	LOT #				
1			6162	526		Injury	Cattle Productions	1100
		1	203	557		Twisted Gut	Todd Grim	525
1			114	543		Pneu	Cattle Productions	960
1			6318	528		Clost	Cattle Productions	1120
1			5	541		Injury	Cattle Productions	800
		1	203	557		Prolapse	Todd Grim	620
1			1217	551		Chronic	Cattle Productions	690
		1	204	558		Pneu	Todd Grim	730
1			1217	551		Clost	Cattle Productions	750
1			1217	551		Hung Itself	Cattle Productions	880
1			4	545		Injury	Cattle Productions	980
		1	111	558		Broken Leg	Todd Grim	1000
1			4	564	X	Injury	Cattle Productions	440
1			5	541		Pneu	Cattle Productions	1230
1			64	557		Injury	Todd Grim	1030
1			4	564	X	Twisted Gut	Cattle Productions	490
	1		500	565		Unknown	Rock River Ranch	1300
1			5354	545		Clost	Cattle Productions	1240
1			113	568		Chronic	Todd Grim	645
1			114	566		Clost	Cattle Productions	908
2			34	572	X	Chronic	Cattle Productions	323
1			6	576		Injury	Cattle Productions	700
1			5152	561		Misc	Cattle Productions	900
1			113	568		Chronic	Todd Grim	770
		1	5	573	X	Clost	Bob Mitchell	450
1			1112	561		Resp	Cattle Productions	1000
1			1718	562		Clost	Cattle Productions	1000
		1	5	573		Chronic	Bob Mitchell	530

2006 Individual Animals Sold Due to Illness or Injury										
		COUNT								
		27								
		0								
		4								
		31								
										Under
		Deaths		FARM	Reason Sold	Sold to	OWNER	500 lbs		
				LOCATION						
DATE	STRS	HFRS-COWS	MIXED	PEN	LOT #					
2/8/06	1			6	550	Knee Injury	Monroe Sale Barn	Cattle Productions		730
2/8/06	2			116	559	Resp	Monroe Sale Barn	Cattle Productions		700
2/8/06	1			1217	551	Resp	Monroe Sale Barn	Cattle Productions		670
2/8/06	1			5152	533	Bloat	Monroe Sale Barn	Cattle Productions		1060
2/8/06	1			2	548	Resp	Monroe Sale Barn	Cattle Productions		740
2/21/06	1			1	535		Dearth Lvstk	Cattle Productions		1000
3/13/06	1			6162	526	Injury	Dearth Lvstk	Cattle Productions		1200
3/13/06			1	201	552	Prolapse	Dearth Lvstk	Cattle Productions		1000
3/23/06	1			1	535	Resp	Sale Barn	Cattle Productions		1000
3/23/06			1	302	554	Resp	Sale Barn	Kevin Peters		840
3/23/06	1			2	548	Injury	Sale Barn	Cattle Productions		900
3/23/06	1			1217	551	Swelled Joints	Sale Barn	Cattle Productions		800
3/23/06	1			116	559	Bloat	Sale Barn	Cattle Productions		950
4/10/06	1			402	534	Injury	Dearth Lvstk	Cattle Productions		
4/10/06	1			6	550	Injury	Dearth Lvstk	Cattle Productions		
4/10/06			1	203	557	Prolapse	Dearth Lvstk	Todd Grim		
4/14/06			1	203	557	Leg injury	Dearth Lvstk	Todd Grim		
5/8/06	1			1	535	Hip injury	Dearth Lvstk	Cattle Productions		1200
5/11/06	2			402	534		Belmont Auction	Cattle Productions		1275
5/11/06	1			401	553		Belmont Auction	Cattle Productions		1170
5/11/06	1			5	541		Belmont Auction	Cattle Productions		1120
6/7/06	1			113	546	Injury	Dearth Lvstk	Cattle Productions		
6/7/06	1			64	557	Injury	Dearth Lvstk	Cattle Productions		
6/22/06	2			2	562		Belmont Auction	Cattle Productions		
6/22/06	1			62	548		Belmont Auction	Cattle Productions		
6/22/06	1			116	559		Belmont Auction	Cattle Productions		
6/22/06	1			1217	551		Belmont Auction	Cattle Productions		
6/29/06	1			6	550		Dearth Lvstk	Cattle Productions		

# Yearly Mortality Summary Table

Form 3-G

Year: 2006

	Number	Size (Weight)	Total
Rendered	29	550	29
Composted*			
Incinerated			
Buried**			
Other			
Total	29		29

\* Include sample information (N, P, and K) if spread on fields

\*\* Include a map showing burial locations and number of pounds buried at each site.

## Form 3-F

Month/Year: 2005

☒ Other

Five Star  
er Stock Removal

\*\* Burial Method—include a map showing burial locations and # of pounds buried at each site.

COLD SPRINGS FARM							
CATTLE SHIPPED & RECEIVED IN 2002							
2005 Dead Animals							
All deads were removed by							
Five Star Stock Removal							
		CURRENT					
		COUNT					
		52					
		17					
		16					
		85					
		Deads		FARM		Under 500 #	Death Cause
				LOCATION			
DATE	STRS	HFRS-COWS	MIXED	PEN	LOT #		
1/11/05	1			1	499		Pneu
1/12/05	1			6	489		Clost
1/15/05	1			5354	505		Pneu
1/17/05	1			4012	492		Injury
1/20/05			1	202	504		Pneu
1/21/05	1			302	500		Pneu
1/22/05	1			6162	485		Bloat
1/25/05			1	201	518		Pneu
1/26/05			1	204	510		Pneu
1/28/05		1		114	506		Pneu
2/1/05	1			55	496		back injury
2/3/05	1			6162	485		Pneu
2/4/05	1			34	514		back injury
2/12/05	1			3019	491		Pneu
2/14/05			1	204	510		Brainer
2/16/05			1	201	518		Pneu
2/27/05		1		114	506		Aneurism
3/1/05			1	202	504		Tetnus
3/3/05	1			6	489		Bacterial inf.
3/10/05			1	201	518		Bloat
3/15/05		1		115	507		Calving problems
3/24/05	1			302	500		Pneu
4/15/05	1			402	519		Injury
4/20/05	1			52	498		Clost
4/21/05	1			55	520		Broken leg
4/26/05	1			2	487		Leg Injury
5/8/05		1		302	523		Clost
5/9/05			1	111	509		Lightning
5/9/05	1			2	487		Broken leg
5/15/05	1			5354	505		Pneu
5/16/05		1		61A	525		Pneu
5/16/05		1		402	519		Pneu
5/22/05			1	9	524		Clost
5/24/05	1			6	489		Broken leg
5/24/05				1	521	X	Chronic
5/26/05	1			301	499		Injury
5/28/05	1			3	526	X	Injury
6/4/05		1		402	51		Clost
6/4/05			1	8	524		IBR Bloat
6/6/05	1			55	520		Pneu
6/13/05	1			402	519		Prolapse
6/13/05	1			61	525		Injury
6/13/05	1			61	525		Old age
6/15/05	1			61	525		Clost
6/26/05	1			34	526	X	Chronic

	Deads			FARM		Under 500 #	Death Cause
				LOCATION			
DATE	STRS	HFRS-COWS	MIXED	PEN	LOT #		
6/28/05		2		302	523		Heat
7/4/05			1	116	504		Pneu
7/5/05		1		402	519		Injury
7/7/06	1			61	525		Pneu
7/7/06	1			34	526	X	Chronic
7/13/06	1			301	499		Pneu
7/14/06	1			9	534	X	Clost
7/16/06	1			5152	533	X	Chronic
7/18/06	1			34	526		Chronic
7/25/06	1			5152	533	X	Chronic
7/25/06	1			34	526	X	Chronic
7/30/06		1		118	531		Injury
8/5/06			1	114	518		Chronic
8/8/06	1			118	531		Chronic
8/10/06		1		202	532		Heat
8/16/06			1	8	524		Clost
8/19/06	1			301	499		Chronic
8/25/05	1			6162	526		Chronic
9/10/06			1	115	518		Chronic
9/10/06	1			6	529		Chronic
9/10/06	1			6	529		Hung Itself
9/19/05				6	529		Chronic
9/19/05				5354	521		Chronic
9/21/05		1		302	540		Chronic
10/7/06		1		402	539		Septicemia
10/7/06		1		402	539		Clost
10/13/06		1		302	540		Injury
10/14/06	1			5152	533		Chronic
10/22/05	1			6	550	X	Clost
10/23/05	1			1	535		Injury
10/23/05	1			1217	551	X	Chronic
10/24/05	1			3	542	X	Water Belly
11/5/05	1			3	542		Chronic
11/5/05	1			6162	526		Chronic
11/7/05			1	302	554	X	Viral Pneu
11/14/05		1		202	556	X	Chronic
11/20/05	1			5354	521		Chronic
12/2/05	1			4	545		Chronic
12/20/05	1			6162	526		Clost
12/21/05	1			301	549		Clost
12/26/05			1	203	557	X	Injury
12/26/05	1			61	526		Clost

# Yearly Mortality Summary Table

Form 3-G

Year: 2005

	Number	Size (Weight)	Total
Rendered			
Composted*			
Incinerated			
Buried**			
Other - <i>Five Star Stock Removal</i>	<i>85</i>		
Total	<i>85</i>		<i>85</i>

\* Include sample information (N, P, and K) if spread on fields

\*\* Include a map showing burial locations and number of pounds buried at each site.

# Chemical Wastes and Raw Materials Discharge Prevention

Form 3-H

Mark those BMP's listed below that are applicable for your operation.

Y	N	NA	Map Legend*	Construction and Post-Construction Storm Water Pollution Prevention Plan
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3H-1	Storage containers for gasoline, diesel fuel, kerosene, and other liquid fuels are free of leaks.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3H-2	Vehicle and portable container filling areas near the fuel storage containers are constructed so as to allow immediate containment and cleanup of fuel spills.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3H-3	Specific areas are designated for equipment maintenance and repair, and the areas include appropriate waste receptacles for spent oils, gasoline, grease and solvents. Housekeeping plan includes regular collection and disposal schedules.
				<b>Storage areas are protected from storm water in accordance with the manufacturers' guidelines for the following materials:</b>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3H-4	<ul style="list-style-type: none"> <li>Oils, grease, and solvents</li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3H-5	<ul style="list-style-type: none"> <li>Paints, stains, brush cleaners and similar materials</li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3H-6	<ul style="list-style-type: none"> <li>Crop protection chemicals (herbicides, pesticides)</li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3H-7	<ul style="list-style-type: none"> <li>Fertilizers (liquid, dry bulk, dry bagged)</li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3H-8	<ul style="list-style-type: none"> <li>Animal treatment non-medicinal (disinfectants, foot baths, dips)</li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3H-9	<ul style="list-style-type: none"> <li>Cleaning and sanitizing materials</li> </ul>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3H-10	<ul style="list-style-type: none"> <li>Pharmaceuticals</li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3H-11	<ul style="list-style-type: none"> <li>Acids or other potentially toxic water pollutants (list _____)</li> </ul>
				<b>The following sites are covered (e.g. roofed or other rainproof covering) or are constructed so as to drain to regularly maintained sediment control devices designed to accommodate such discharges:</b>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3H-12	<ul style="list-style-type: none"> <li>Materials handling equipment storage sites. <i>Example: Bucket loader used for silage and commodities loading, mixing. Show where loader is stored, and if stored outside, what happens to storm water contaminated with raw materials.</i></li> </ul>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3H-13	<ul style="list-style-type: none"> <li>Shipping and receiving areas. <i>Example: a concrete apron outside the shed has storm water diverted around it and water off the apron goes into a grassed infiltration area.</i></li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3H-14	<ul style="list-style-type: none"> <li>Storage for raw materials used in the manufacture of concrete including sand, aggregate, cement, water and admixtures</li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3H-15	<ul style="list-style-type: none"> <li>Storage for other raw construction materials (list _____)</li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3H-16	<ul style="list-style-type: none"> <li>Storage for other waste generated off-site</li> </ul>

				<b>The following raw materials or products are handled at the facility and are covered (e.g. roofed or other rainproof covering) or storages are constructed so as to drain contaminated storm water to appropriate containment areas:</b>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3H-17	• Feed
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3H-18	• Whey
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3H-19	• Silage leachate. <i>Example: Silage leachate is directed to a temporary storage tank that is emptied as necessary and contents land-applied.</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3H-20	• Other leachate (describe _____)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3H-21	• Byproducts used for feed. <i>Example: Distillers grains are brought in by semi-load and stored on a concrete pad; storm water from the pad is drained to an earthen storage for later land application.</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3H-22	• Milk <i>Example: Non-saleable milk is land-applied at or below agronomic rates.</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3H-23	• Eggs
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3H-24	• Other (list _____)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Routine housekeeping plan includes cleanup of spilled raw materials so as to minimize storm water contamination. <i>Example: Cleaning up spilled feed beneath bulk bins.</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3H-25	Equipment wash down areas are located on-site only in areas which drain to regularly maintained storages designed to accommodate such discharges. <i>Example: Truck wash for hauling animals drains to feedlot holding pond.</i>
				<b>The storm water pollution prevention plan for access roads used to bring in or carry out raw materials, waste materials, by-products, or products that are used or created by the facility consists of:</b>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		• Any spilled materials on or alongside the road(s) are routinely cleaned up and properly disposed of
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		• Vegetation in drainage channels alongside the road(s) is maintained by mowing, sediment removal, and/or re-seeding as required
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Adequately maintained sanitary facilities (toilets and septic systems) are provided.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3H-26	Other practices (list _____)

\* Mark the map legend codes on facility/production area maps where appropriate.

# Temporary Manure Stack Discharge Prevention

Form 3-J

Mark those BMP's listed below that are applicable for this part of your operation.

Y	N	NA	Map Legend*	Practices
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3J-1	<b>Location</b> —Temporary manure stack is located down gradient (slope) from wells and springs.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<b>Location</b> —Manure stack is located over soil surface that is highly impermeable and no aquifer material is within five feet of the bottom of the stack.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<b>Location</b> —Manure stack is constructed more than 100 feet from non-potable water wells, 200 feet from potable water supply wells, and 400 feet from community water supply wells.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<b>Operation</b> —Manure stack is completely emptied within a six-month period.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3J-2	<b>Water diversions</b> —Manure stack has adequate diversion dikes, walls or curbs that will prevent excessive outside surface waters from flowing through the stack area.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<b>Runoff</b> —There is negligible outside surface water that can flow through or otherwise contact the manure stack.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3J-3	<b>Runoff disposal</b> —The runoff from the manure stack drains to a livestock waste-handling facility.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3J-4	<b>Cover</b> —Temporary manure stack is covered with a roof, tarp, or other device to keep precipitation off the manure.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3J-5	<b>Liner</b> —Manure stack is located over shallow aquifer material, in a karst area, or within 400 feet of a natural depression in a karst area; and is lined with appropriate clay, geosynthetic, or other liner material to protect groundwater.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3J-6	<b>Other practices</b> (describe) _____

\* Mark the map legend codes on facility/production area maps where appropriate.

# Form 3-J

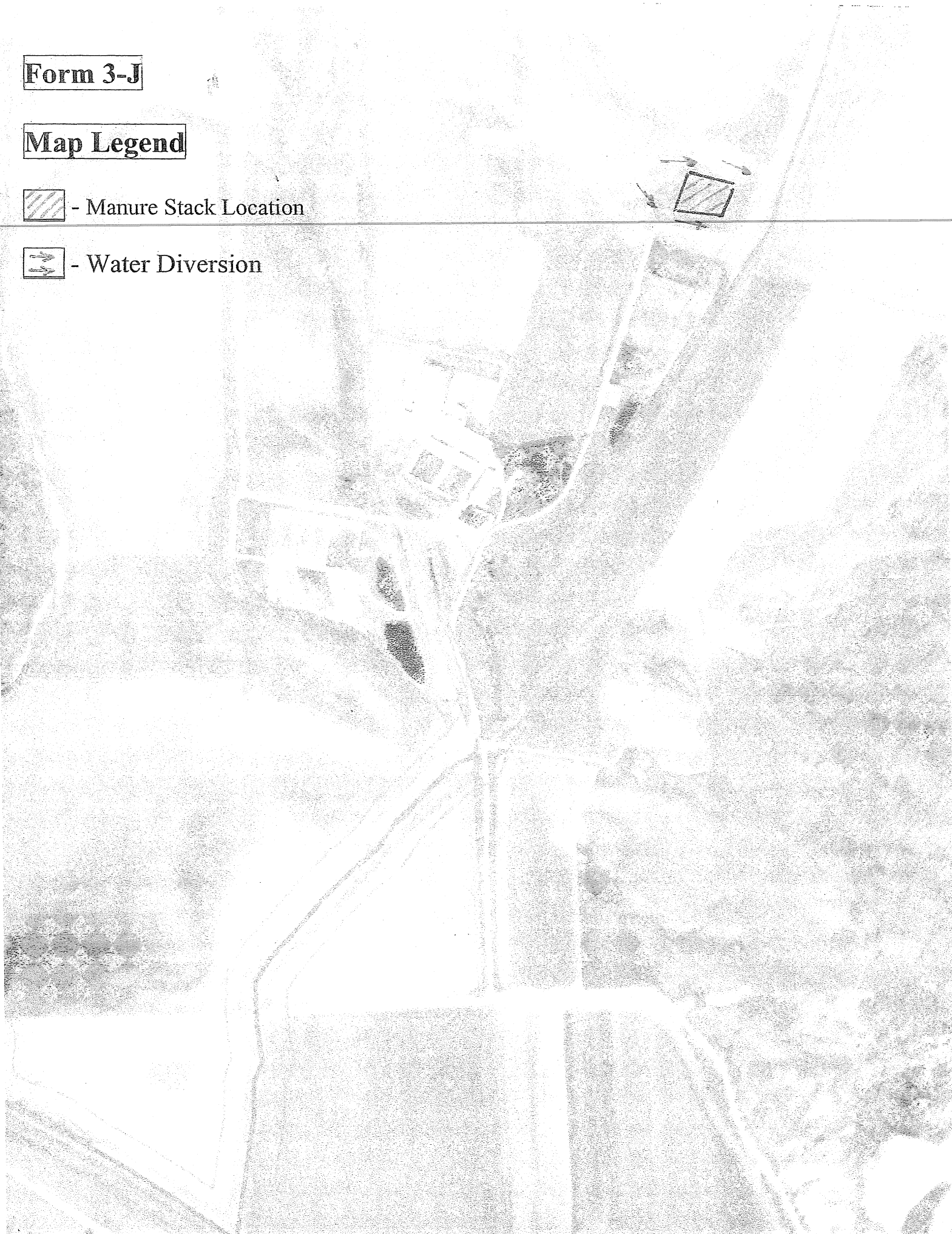
## Map Legend



- Manure Stack Location



- Water Diversion



# Manure Storage Description and Dimensions

Form 4-A

Storage name: COLD SPRINGS FARM

Type of storage: (check one)

- |  |  |
|--|--|
| <input type="checkbox"/> Pit under slats   | <input type="checkbox"/> Single-stage lagoon (treatment and storage)   |
| <input checked="" type="checkbox"/> Outside earthen embanked storage   | <input type="checkbox"/> Multi-stage lagoon (treatment, first stage)   |
| <input type="checkbox"/> Above ground tank (Example: Slurry store)   | <input type="checkbox"/> Multi-stage lagoon (treatment/storage, second or later stage)   |
| <input type="checkbox"/> In-ground tank (Example: concrete round or rectangular tank)  | <input type="checkbox"/> Septic tank or other storage (Example: for egg processing water)  |
| <input checked="" type="checkbox"/> Bedded pack in building  | <input type="checkbox"/> Dry manure storage forming lower part of two-story building (Example: poultry layer hi-rise; swine hi-rise with composting) |
| <input type="checkbox"/> Solid stack (Example: outside stack with drainage to vegetative filter)                             | <input type="checkbox"/> Manure storage building for dry manure  |
| <input type="checkbox"/> Semi-solid manure storage with porous dam drains (Example: dairy picket dam)                        | <input checked="" type="checkbox"/> Reception pits and transfer facilities   |
| <input checked="" type="checkbox"/> Holding pond (Example: pond for receiving feedlot runoff, no direct receiving of manure) | <input type="checkbox"/> Other _____   |

Description and dimensions

Refer to attached

Diagram

Refer to attached

Diagram of manure "management train." For more complex systems, see Appendix B.

Certifications and registrations for this manure storage (store originals in Archive section of Plan):

- |   |                                      |                                |   |
|---|--------------------------------------|--------------------------------|---|
| <input type="checkbox"/> Construction           | <input type="checkbox"/> Lagoon      | <input type="checkbox"/> Liner | <input type="checkbox"/> Groundwater monitoring |
| <input type="checkbox"/> EPA Storm Water Permit | <input type="checkbox"/> Other _____ |                                |   |

This storage takes ☐ runoff ☐ wastewater ☐ rinse water ☐ other \_\_\_\_\_  
from \_\_\_\_\_ (source).

Operational details (Example: scheduling for manure removal, existing collection and transfer equipment, system, procedures and maintenance, etc.) (Step 11 covers practices when manure cannot be applied due to weather conditions.)

When manure can not be applied due to weather, crops, etc., we do one of the following:

- 1) Compost the manure as described previously
- 2) Store manure in an area (100,000 sq ft) that is bermed and segregated from surface water and/or erosion

## Temporary Manure Stack Discharge Prevention

Form 3-J

Mark those BMP's listed below that are applicable for this part of your operation.





Y	N	NA	Map Legend*	Practices
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3J-1	<b>Location</b> —Temporary manure stack is located down gradient (slope) from wells and springs.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<b>Location</b> —Manure stack is located over soil surface that is highly impermeable and no aquifer material is within five feet of the bottom of the stack.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<b>Location</b> —Manure stack is constructed more than 100 feet from non-potable water wells, 200 feet from potable water supply wells, and 400 feet from community water supply wells.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<b>Operation</b> —Manure stack is completely emptied within a six-month period.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3J-2	<b>Water diversions</b> —Manure stack has adequate diversion dikes, walls or curbs that will prevent excessive outside surface waters from flowing through the stack area.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<b>Runoff</b> —There is negligible outside surface water that can flow through or otherwise contact the manure stack.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3J-3	<b>Runoff disposal</b> —The runoff from the manure stack drains to a livestock waste-handling facility.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3J-4	<b>Cover</b> —Temporary manure stack is covered with a roof, tarp, or other device to keep precipitation off the manure.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3J-5	<b>Liner</b> —Manure stack is located over shallow aquifer material, in a karst area, or within 400 feet of a natural depression in a karst area; and is lined with appropriate clay, geosynthetic, or other liner material to protect groundwater.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3J-6	<b>Other practices</b> (describe) _____

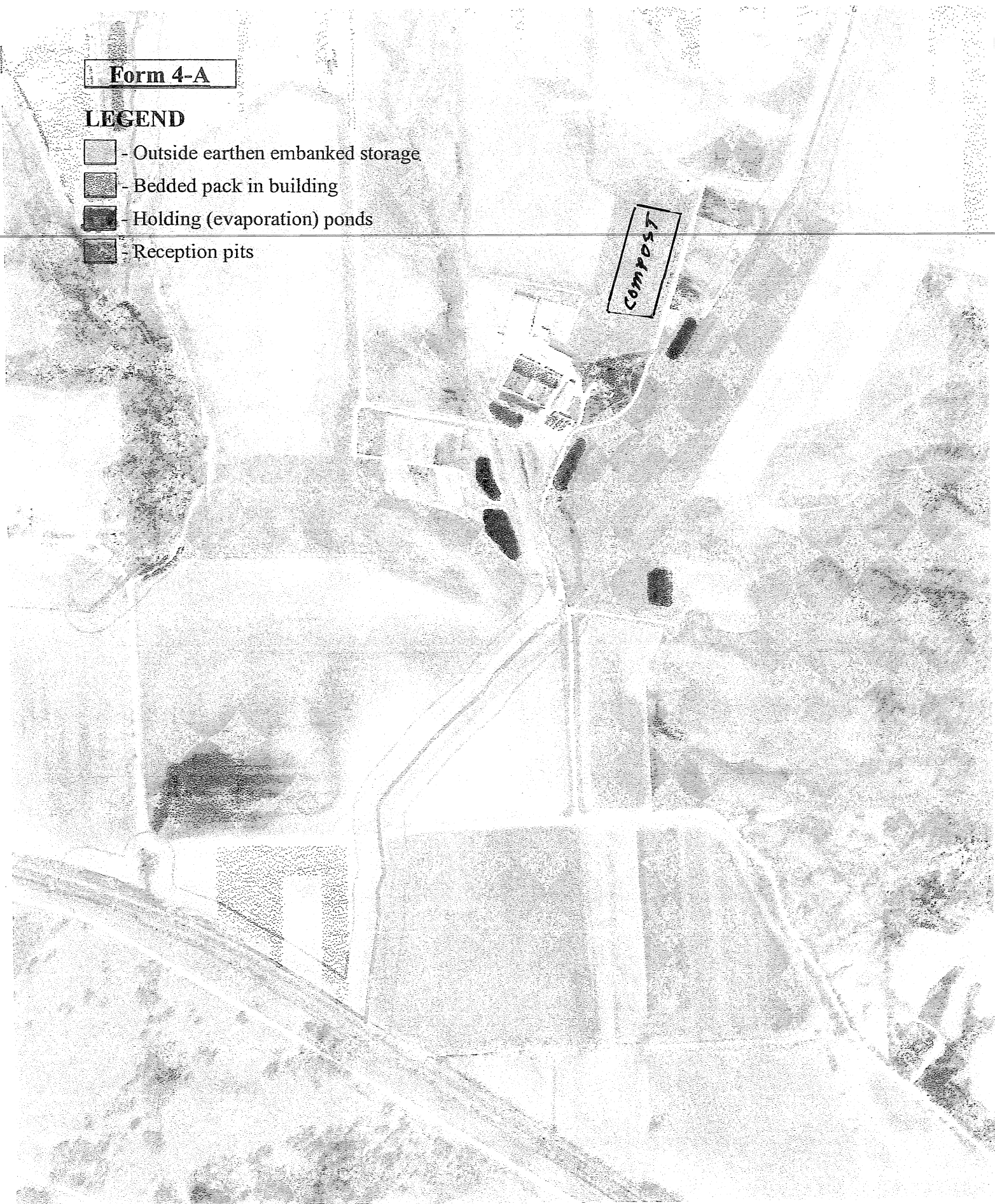
\* Mark the map legend codes on facility/production area maps where appropriate.

The attached map identifies the location of the temporary manure stack. This area has been excavated, leveled and bermed to hold any manure within its banks and divert water flow to the outside of the stack area.

**Form 4-A**





**LEGEND**

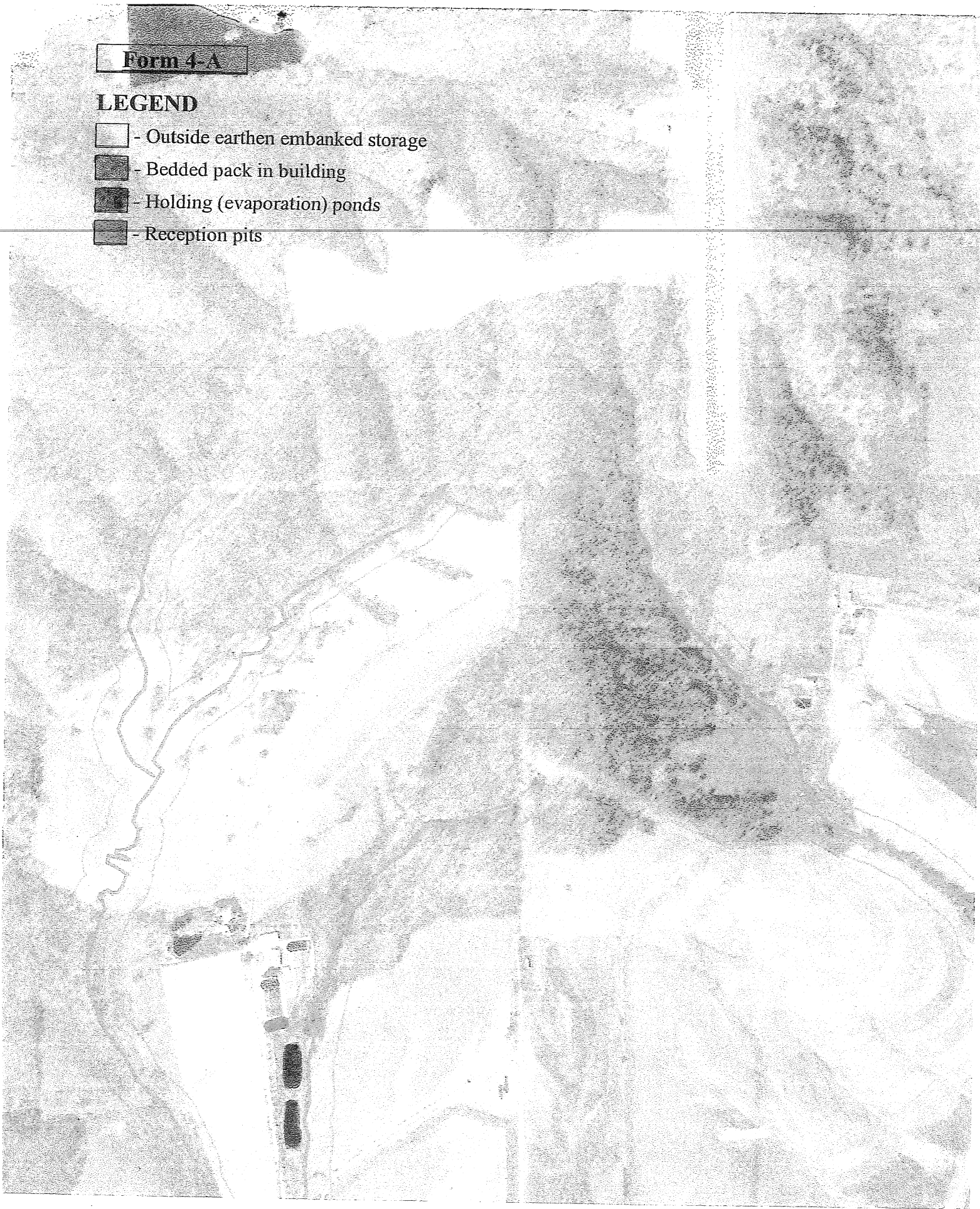
-  - Outside earthen embanked storage
-  - Bedded pack in building
-  - Holding (evaporation) ponds
-  - Reception pits



**Form 4-A**

**LEGEND**

-  - Outside earthen embanked storage
-  - Bedded pack in building
-  - Holding (evaporation) ponds
-  - Reception pits



**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD**

**COMPOSTING FACILITY**

(No.)  
CODE 317

**DEFINITION**

This is a treatment component of an agricultural management system for the biological stabilization of organic material.

**PURPOSES**

To reduce the pollution potential of organic agricultural wastes to surface and ground water.

**CONDITIONS WHERE PRACTICE APPLIES**

This practice applies where:

- Organic waste material is generated by agricultural production or processing;
- A composting facility is a component of a planned agricultural waste management system; and,
- A composting facility can be constructed, operated and maintained without polluting air and/or water resources.
- The composting facility is one of the following types:
  1. Windrow
  2. Static Pile
  3. In-vessel

**CRITERIA**

**General Criteria Applicable To All Purposes**

**Laws and Regulations.** The installation and operation of the composting facility shall comply with 510 ILCS 77/1, Livestock Management Facilities Act and all other federal, state, and local laws, rules, and regulations.

**Safety.** Safety and personal protection features and practices shall be incorporated

into the facility and its operation as appropriate to minimize the occurrence of equipment hazards and biological agents during the composting process.

**Facility Siting.** The bottom elevation of the composting facility shall be above the seasonal high water table and on soils with slow to moderate permeability that does not allow materials to contaminate the ground water, and meets all applicable regulations, or the facility shall be installed on concrete slabs or other appropriate liners.

Ideally, compost facilities should be located outside of floodplains. However, if site restrictions require location within a floodplain, they shall be protected from inundation or damage from a 25-year flood event, or larger.

Locate compost facilities so prevailing winds and landscape elements such as building arrangement, landforms, and vegetation minimize odors and protect the visual resource.

Direct surface runoff away from the compost facility. Direct contaminated runoff from compost facilities to an appropriate storage or treatment facility for further management.

The facility shall have all year, all weather access.

**Compost Mix.** Develop a compost mix that encourages aerobic microbial decomposition and avoids nuisance odors.

**Carbon-Nitrogen Ratio.** The initial compost mix shall result in a Carbon to Nitrogen ratio between 25:1 and 40:1. Compost with a greater carbon to nitrogen ratio can be used if nitrogen immobilization is not a concern.

Where more than two ingredients are to be blended, the two main ingredients are to be used in the analysis for the desired C:N and mixed accordingly. Adding up to 50% by

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resource Conservation Service.

weight of the other ingredients to improve workability and air movement is permissible as long as the C:N of the added ingredient does not exceed the target C:N of the compost.

**Carbon Source.** A dependable source of carbonaceous material with a high carbon to nitrogen ratio (C: N) shall be stored and available to mix with nitrogen rich waste materials. Wood chips, sawdust, peanut hulls, straw, corn cobs, bark peat moss, and well bedded horse manure are good sources of carbon.

**Bulking Materials.** Add bulking materials to the mix as necessary to enhance aeration.

The bulking material may be the carbonaceous material used in the mix or a non-biodegradable material that is salvaged at the end of the compost period. If a non-biodegradable material is used, provision shall be made for its salvage.

**Moisture Level.** Provision may be made for maintaining adequate moisture in the compost mix throughout the compost period within the range of 40 to 65 percent (wet basis).

In high precipitation climatic regions, care shall be taken to prevent excess moisture from accumulating in the compost. Facility covers may be required to provide for a suitable product

**Temperature of Compost Mix.** Manage the compost to attain and then maintain the internal temperature for the duration required to meet management goals.

When the management goal is to reduce pathogens, the compost shall attain a temperature greater than 130°F for at least 5 days as an average throughout the compost mass.

This temperature and time criterion may be achieved during either primary or secondary composting stages or as the cumulative time of greater than 130°F in both stages.

The material should remain at or above 110 °F for the remainder of the designated composting period.

**Turning/Aeration.** The frequency of turning/aeration shall be appropriate for the composting method used, and to attain the desired amount of moisture removal and

temperature control while maintaining aerobic degradation.

**Facility Type.** Selection of the composting facility/method shall be based on the availability of raw material, the desired quality of final compost, equipment, labor, time, and land available.

See National Engineering Handbook, Part 651 Agricultural Waste Management Field Handbook, Chapter 10 for design of each type of facility.

Facility structural elements such as permanent bins, concrete slabs, and roofs shall meet the requirements of Conservation Practice Standard 313, Waste Storage Facility.

**Facility Size.** Size the compost facility to accommodate the amount of raw material planned for active composting plus space required for curing.

Composting facilities for the purpose of processing animal carcasses are to include a primary composting unit into which alternate layers of low moisture content manure (unusual poultry manure), carbon source material (straw is common), and dead animal carcasses are placed. A secondary composting unit is often necessary to complete the composting process.

Dimensions selected for elements of the compost facility shall accommodate equipment used for loading, unloading, and aeration.

Sizing of facilities for composting dead animals shall be based on normal mortality loss records for the operation. Or, if not available, locally established mortality rates for the type of operation shall be used.

**Compost Period.** Continue the composting process long enough for the compost mix to reach the stability level where it can be safely stored without undesirable odors. It shall also possess the desired characteristics for its use, such as lack of noxious odor, desired moisture content, level of decomposition of original components and texture. The compost period shall involve primary and secondary composting as required to achieve these characteristics.

Test the finished compost as appropriate to assure that the required stabilization has been reached.

**Use of Finished Compost.** Land application of finished compost shall be in accordance with Conservation Practice Standards 590, Nutrient Management, and 633, Waste Utilization.

## CONSIDERATIONS

Develop an initial compost mix with a Carbon to Nitrogen ratio of at least 30:1 to reduce most offensive odors.

Minimize odors and nitrogen loss by selecting carbonaceous material that, when blended with the nitrogenous material; provides a balance of nutrients and porous texture for aeration.

Maximize solar warming by aligning piles north to south configured with moderate side slopes.

In humid areas, do not locate piles (windrows) across the slope to prevent ponding and soginess.

Protect compost facilities from the wind in cold climates. Wind protection may help prevent excess drying of the compost in dry climates.

Composting operations require close management. Management capabilities of the operator and availability of labor should be assessed as part of the planning and implementing process.

Appropriate equipment must be available for initial mixing, turning, and hauling composted material and carbonaceous material. Appropriate long stem thermometers should be available for managing the composting material.

## PLANS AND SPECIFICATIONS

Plans and specifications shall be prepared in accordance with the criteria of this standard and shall describe the requirements for applying the practice to achieve its intended use.

## OPERATION AND MAINTENANCE

Develop an operation and maintenance plan that is consistent with the purposes of this

practice, and the life of the composting facility. Recipe ingredients and sequence that they are layered and mixed shall be given in the plan.

Safety requirements for operation of the composting facility shall be provided.

Manage the compost piles for temperature, odors, moisture, and oxygen, as appropriate. Make adjustments throughout the composting period to insure proper composting processes.

Closely monitor temperatures above 165°F. Take action immediately to cool piles that have reached temperatures above 185°F.

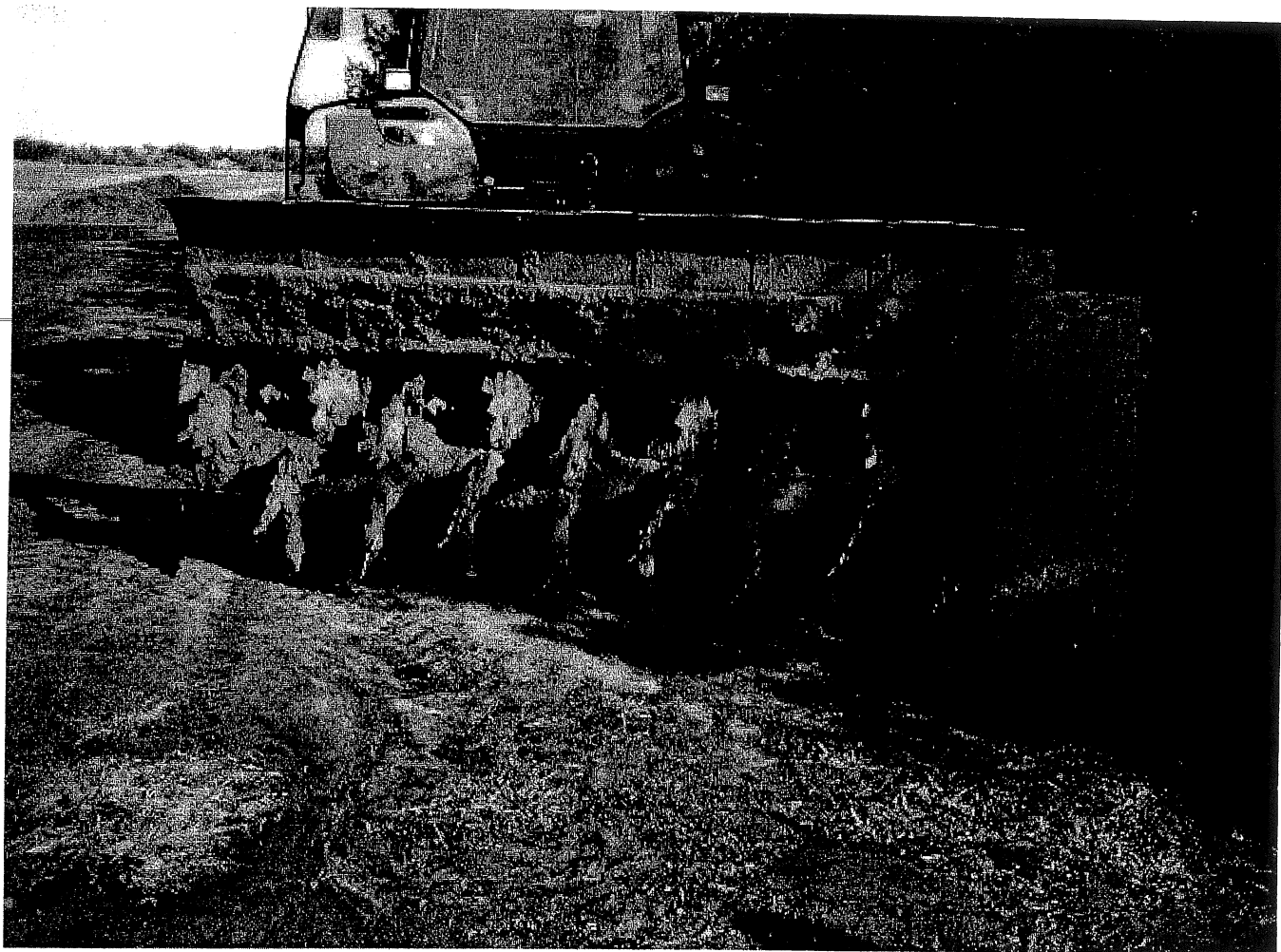
The operation and maintenance plan shall state that composting is a biological process. It requires a combination of art and science for success. Hence, the operation may need to undergo some trial and error in the start-up of a new composting facility.

## REFERENCE

National Engineering Handbook, Part 651  
Agricultural Waste Management Field  
Handbook, Chapter 10.



This compost area is approximately 130' x 350'. The slope is  $< 2^\circ$  and we can be processing up to seven windrows. With an adequate carbon source and equipment capable of the task, we can convert manure waste to stable organic material in six weeks.



This is the Brown Bear composting/aerator.



And this is the Brown Bear composting/aerator in action. We can work about 750 tons of compost per hour. Windrows are turned daily for the first seven days, then every other day in weeks 2 & 3. Then it is twice a week.

# Manure Sample Analysis Results—Summary of All Manure Storages

Form 5-A

Year: 2006

Attach lab results to this form

Storage name (same name as Form 4-A)	Lab Sample date Farm sampling date	Sampling method	Total N	Ammonium-N	P <sub>2</sub> O <sub>5</sub> Total P	K <sub>2</sub> O Total K	% Total Solids	Other nutrients (list) (Optional)	Notes	Sampling supervised by:	Lab name and ID#
	<input checked="" type="checkbox"/> M/D/Y	Insert code	<input type="checkbox"/> lb/1000 gal. <input checked="" type="checkbox"/> lb/ton <input type="checkbox"/> ppm <input type="checkbox"/> percent	<input type="checkbox"/> lb/1000 gal. <input type="checkbox"/> lb/ton <input type="checkbox"/> ppm <input type="checkbox"/> percent	<input type="checkbox"/> lb/1000 gal. <input checked="" type="checkbox"/> lb/ton <input type="checkbox"/> ppm <input type="checkbox"/> percent	<input type="checkbox"/> lb/1000 gal. <input checked="" type="checkbox"/> lb/ton <input type="checkbox"/> ppm <input type="checkbox"/> percent		<input type="checkbox"/> lb/1000 gal. <input type="checkbox"/> lb/ton <input type="checkbox"/> ppm <input type="checkbox"/> percent	Comment here on possible reasons for any unusual sample numbers. Feeding changes, water dilution, etc.	Check (✓) if this person is a Certified Livestock Mgr	
Dirt Pens	11/15/06	MX	12.34		11.3	6.52				<input checked="" type="checkbox"/>	UW
Cmnt Pen	11/15/06	MX	12.05		8.97	11.87				<input checked="" type="checkbox"/>	UW
Stack 50	8/8/06	S	4.39		6.24	.18			Storage pile	<input checked="" type="checkbox"/>	UW
Row 1	8/8/06	S	9.45		9.69	3.55			Start of Compost	<input checked="" type="checkbox"/>	UW
Row 2	8/8/06	S	14.23		19.29	6.45			New windrow	<input checked="" type="checkbox"/>	UW
Row 3	8/8/06	S	7.58		8.23	2.16			Start of Compost	<input checked="" type="checkbox"/>	UW
Row 4	8/8/06	S	7.26		7.17	1.54			25% composted	<input checked="" type="checkbox"/>	UW
Dirt Pens	9/13/05	S	14.48		7.58	9.93				<input checked="" type="checkbox"/>	UW
Cmnt Pen	9/13/05	S	16.07		11.42	11.9				<input checked="" type="checkbox"/>	UW
Conc Pit	9/13/05	LC	5.69		2.17	2.31			Pit below 1-4	<input checked="" type="checkbox"/>	UW
Pond	9/13/05	LS	.2		.04	.94			Pond @ 100's	<input checked="" type="checkbox"/>	UW

## SAMPLING METHODS (INSERT APPROPRIATE CODE LETTERS)

**S:** Representative sample of solid or semi-solid manure from dry stack, bedded pack, etc.

**MX:** Mixed sample after agitation

**TC:** Top to bottom composite from tank, pit, etc.

Stratified sample of tank, pit, etc.

**TT top, TM middle, TB bottom**

**LS:** Lagoon supernatant (liquid)

**LG:** Lagoon sludge

**LC:** Lagoon supernatant and sludge combined sample

**O:** Other (explain) \_\_\_\_\_

**Samples Analyzed By:**

UW Soil & Forage Analysis Lab  
8396 Yellowstone Drive  
Marshfield, WI 54449  
(715) 387-2523

# MANURE ANALYSIS REPORT

COOPERATIVE EXTENSION  
University of Wisconsin-Extension  
University of Wisconsin-Madison  
Soils Department, Madison, WI

**Report #:** 10058**Lab #:** 13380-1338**Date received:** 11/13/2006**Account:** 555901**Client:** Cold Springs Farm**County:** Wood**Date processed:** 11/15/2006**Send to:**

Report also available online at <http://uwlab.soils.wisc.edu/reports>. Lab #: 10058 Access code: p8uc

**Sample Information****Sample Name:** Dirt 13381**Material:** Beef**Type of Storage:** other**Storage System:** Solid**Type of Bedding:** corn stalks**Laboratory Analysis****Moisture:** 38.30%**Dry Matter:** 61.70%**Estimated Available Nutrient Credits for Manure:**

	<u>Total Nutrients</u> lbs/ton	<u>In 1st Year</u> <u>of Application</u> lbs/ton	<u>If Applied 2</u> <u>Consecutive Yrs</u> lbs/ton	<u>If Applied 3</u> <u>Consecutive Yrs</u> lbs/ton
Total Nitrogen (Injected)	12.34	4.32	5.55	6.17
Total Nitrogen (Surface Applied)	12.34	3.09	4.32	4.94
Total Phosphorus as P <sub>2</sub> O <sub>5</sub>	11.30	6.78	7.91	8.48
Total Potassium as K <sub>2</sub> O	6.52	5.22	5.87	6.19
Sulfur	2.84	1.70	1.99	2.13
Estimated Value of Available Nutrients in Surface Applied Manure <sup>1</sup>		\$5.10	\$6.18	\$6.73

**Additional Information**

- 1 Value based on commercial fertilizer costs as of 9/1/2005:  
 N (urea) \$0.38/lb  
 P<sub>2</sub>O<sub>5</sub> (Triple Superphosphate) \$0.35/lb  
 K<sub>2</sub>O (Potash) \$0.21/lb  
 S (Elemental Sulfur) \$0.27/lb

**Samples Analyzed By:**

UW Soil & Forage Analysis Lab  
8396 Yellowstone Drive  
Marshfield, WI 54449  
(715) 387-2523

# MANURE ANALYSIS REPORT

COOPERATIVE EXTENSION  
University of Wisconsin-Extension  
University of Wisconsin-Madison  
Soils Department, Madison, WI

Report #: 10058

Lab #: 13380-1338

Date received: 11/13/2006

Account: 555901

Client: Cold Springs Farm

County: Wood

Date processed: 11/15/2006

Send to:

Report also available online at <http://uwlabs.soils.wisc.edu/reports>.

Lab #: 10058 Access code: p8uc

**Sample Information**

Sample Name: Cement 13380

Material: Beef

Type of Storage: other

Storage System: Solid

Type of Bedding: corn stalks

**Laboratory Analysis**

Moisture: 74.90%

Dry Matter: 25.10%

**Estimated Available Nutrient Credits for Manure:**

	<u>Total Nutrients</u> lbs/ton	<u>In 1st Year of Application</u> lbs/ton	<u>If Applied 2 Consecutive Yrs</u> lbs/ton	<u>If Applied 3 Consecutive Yrs</u> lbs/ton
Total Nitrogen (Injected)	12.05	4.22	5.42	6.03
Total Nitrogen (Surface Applied)	12.05	3.01	4.22	4.82
Total Phosphorus as P <sub>2</sub> O <sub>5</sub>	8.97	5.38	6.28	6.73
Total Potassium as K <sub>2</sub> O	11.87	9.50	10.68	11.28
Sulfur	2.31	1.39	1.62	1.73
Estimated Value of Available Nutrients in Surface Applied Manure <sup>1</sup>		\$5.39	\$6.48	\$7.03

**Additional Information**<sup>1</sup> Value based on commercial fertilizer costs as of 9/1/2005:

N (urea) \$0.38/lb  
P<sub>2</sub>O<sub>5</sub> (Triple Superphosphate) \$0.35/lb  
K<sub>2</sub>O (Potash) \$0.21/lb  
S (Elemental Sulfur) \$0.27/lb

Samples Analyzed By:  
UW Soil & Forage Analysis Lab  
8396 Yellowstone Drive  
Marshfield, WI 54449  
(715) 387-2523

# MANURE ANALYSIS REPORT

COOPERATIVE EXTENSION  
University of Wisconsin-Extension  
University of Wisconsin-Madison  
Soils Department, Madison, WI

Report #: 8150

Lab #: 6212

Date received: 8/4/2006

Account: 557368

County: Wood

Date processed: 8/8/2006

Send to:

Report also available online at <http://uwlab.soils.wisc.edu/reports>. Lab #: 8150 Access code: cqsq

## Sample Information

Sample Name: 50's

Material: Beef

Type of Storage: other

Storage System: Solid

Type of Bedding: sawdust/shavings/bark

## Moisture and Dry Matter Analysis

Moisture: 24.30%

Dry Matter: 75.70%

### Estimated Available Nutrient Credits for Manure:

	Total Nutrients lbs/ton	In 1st Year of Application lbs/ton	If Applied 2 Consecutive Yrs lbs/ton	If Applied 3 Consecutive Yrs lbs/ton
Total Nitrogen (Injected)	4.39	1.54	1.98	2.20
Total Nitrogen (Surface Applied)	4.39	1.10	1.54	1.76
Total Phosphorus as $P_2O_5$	6.24	3.74	4.37	4.68
Total Potassium as $K_2O$	0.18	0.14	0.16	0.17
Sulfur	2.73	1.84	1.91	2.05
Estimated Value of Available Nutrients in Surface Applied Manure <sup>1</sup>		\$2.20	\$2.67	\$2.90

### Additional Information

- 1 Value based on commercial fertilizer costs as of 9/1/2005:  
N (urea) \$0.38/lb  
 $P_2O_5$  (Triple Superphosphate) \$0.35/lb  
 $K_2O$  (Potash) \$0.21/lb  
S (Elemental Sulfur) \$0.27/lb

Samples Analyzed By:  
UW Soil & Forage Analysis Lab  
6386 Yellowstone Drive  
Marshfield, WI 54449  
(715) 387-2523

# MANURE ANALYSIS REPORT

COOPERATIVE EXTENSION  
University of Wisconsin-Extension  
University of Wisconsin-Madison  
Soils Department, Madison, WI

Report #: 8146

Lab #: 8208

Date received: 8/4/2006

Account: 557368

County: Wood

Date processed: 8/8/2006

Send to:

Report also available online at <http://uwlab.solla.wisc.edu/reports>. Lab #: 8146 Access code: thbn

## Sample Information

Sample Name: Row #1

Material: Beef

Storage System: Solid

Type of Storage: other

Type of Bedding: sawdust/shavings/bark

## Applied Analysis

Moisture: 29.50%

Dry Matter: 70.50%

### Estimated Available Nutrient Credits for Manure:

	Total Nutrients lbs/ton	In 1st Year of Application lbs/ton	If Applied 2 Consecutive Yrs lbs/ton	If Applied 3 Consecutive Yrs lbs/ton
Total Nitrogen (Injected)	9.45	3.31	4.25	4.73
Total Nitrogen (Surface Applied)	9.45	2.36	3.31	3.78
Total Phosphorus as $P_2O_5$	9.89	5.81	6.78	7.27
Total Potassium as $K_2O$	3.55	2.84	3.19	3.37
Sulfur	2.54	1.52	1.78	1.91
Estimated Value of Available Nutrients in Surface Applied Manure <sup>1</sup>		\$3.94	\$4.78	\$5.21

### Additional Information

<sup>1</sup> Value based on commercial fertilizer costs as of 8/1/2005:

N (urea) \$0.38/lb  
 $P_2O_5$  (Triple Superphosphate) \$0.35/lb  
 $K_2O$  (Potash) \$0.21/lb  
S (Elemental Sulfur) \$0.27/lb

Samples Analyzed By:  
UW Soil & Forage Analysis Lab  
8386 Yellowstone Drive  
Marshfield, WI 54449  
(715) 387-2523

# MANURE ANALYSIS REPORT

COOPERATIVE EXTENSION  
University of Wisconsin-Extension  
University of Wisconsin-Madison  
Soils Department, Madison, WI

Report #: 8147

Lab #: 6209

Date received: 8/4/2006

Account: 557368

County: Wood

Date processed: 8/8/2006

Send to:

Concrete per

Report also available online at <http://uwlab.soils.wisc.edu/reports>.

Lab #: 8147 Access code: 98gp

## Sample Information

Sample Name: Row #2

Material: Beef

Type of Storage: other

Storage System: Solid

Type of Bedding: sawdust/shavings/bark

## Laboratory Analysis

Moisture: 27.40%

Dry Matter: 72.60%

### Estimated Available Nutrient Credits for Manure:

	Total Nutrients lbs/ton	In 1st Year of Application lbs/ton	If Applied 2 Consecutive Yrs lbs/ton	If Applied 3 Consecutive Yrs lbs/ton
Total Nitrogen (Injected)	14.23	4.98	8.40	7.12
Total Nitrogen (Surface Applied)	14.23	3.56	4.98	5.69
Total Phosphorus as $P_2O_5$	19.29	11.57	13.50	14.47
Total Potassium as $K_2O$	6.45	5.16	5.80	6.13
Sulfur	3.05	1.83	2.14	2.29
Estimated Value of Available Nutrients in Surface Applied Manure <sup>1</sup>		\$6.97	\$8.41	\$9.13

### Additional Information

1 Value based on commercial fertilizer costs as of 9/1/2005:

N (urea) \$0.38/lb  
 $P_2O_5$  (Triple Superphosphate) \$0.35/lb  
 $K_2O$  (Potash) \$0.21/lb  
S (Elemental Sulfur) \$0.27/lb

Samples Analyzed By:  
UW Soil & Forage Analysis Lab  
8398 Yellowstone Drive  
Marshfield, WI 54449  
(715) 387-2523

# MANURE ANALYSIS REPORT

COOPERATIVE EXTENSION  
University of Wisconsin-Extension  
University of Wisconsin-Madison  
Soils Department, Madison, WI

Report #: 8148

Lab #: 6210

Date received: 8/4/2008

Account: 557368

County: Wood

Date processed: 8/8/2008

Send to:

Report also available online at <http://uwlab.soils.wisc.edu/reports>. Lab #: 8148 Access code: r344

## Sample Information

Sample Name: Row #3

Material: Beef

Type of Storage: other

Storage System: Solid

Type of Bedding: sawdust/shavings/bark

## Laboratory Analysis

Moisture: 35.80%

Dry Matter: 64.20%

### Estimated Available Nutrient Credits for Manure:

	Total Nutrients lbs/ton	In 1st Year of Application lbs/ton	If Applied 2 Consecutive Yrs lbs/ton	If Applied 3 Consecutive Yrs lbs/ton
Total Nitrogen (Injected)	7.58	2.85	3.41	3.79
Total Nitrogen (Surface Applied)	7.58	1.80	2.65	3.03
Total Phosphorus as $P_2O_5$	8.23	4.94	5.78	6.17
Total Potassium as $K_2O$	2.16	1.73	1.94	2.05
Sulfur	2.44	1.46	1.71	1.83
Estimated Value of Available Nutrients in Surface Applied Manure <sup>1</sup>		\$3.20	\$3.90	\$4.23

### Additional Information

- 1 Value based on commercial fertilizer costs as of 9/1/2005:  
N (urea) \$0.38/lb  
 $P_2O_5$  (Triple Superphosphate) \$0.35/lb  
 $K_2O$  (Potash) \$0.21/lb  
S (Elemental Sulfur) \$0.27/lb

Samples Analyzed By:  
UW Soil & Forage Analysis Lab  
8396 Yellowstone Drive  
Marshfield, WI 54449  
(715) 387-2523

# MANURE ANALYSIS REPORT

COOPERATIVE EXTENSION  
University of Wisconsin-Extension  
University of Wisconsin-Madison  
Soils Department, Madison, WI

Report #: 8149

Lab #: 6211

Date received: 8/4/2006

Account: 557368

County: Wood

Date processed: 8/8/2006

Send to:

Report also available online at <http://uwlab.soils.wisc.edu/reports>.

Lab #: 8149 Access code: vr43

## Sample Information

Sample Name: Row #4

Material: Beef

Type of Storage: other

Storage System: Solid

Type of Bedding: sawdust/shavings/bark

## Laboratory Analysis

Moisture: 28.80%

Dry Matter: 71.20%

### Estimated Available Nutrient Credits for Manure:

	Total Nutrients lbs/ton	In 1st Year of Application lbs/ton	If Applied 2 Consecutive Yrs lbs/ton	If Applied 3 Consecutive Yrs lbs/ton
Total Nitrogen (Injected)	7.26	2.54	3.27	3.63
Total Nitrogen (Surface Applied)	7.26	1.82	2.54	2.90
Total Phosphorus as $P_2O_5$	7.17	4.30	5.02	5.38
Total Potassium as $K_2O$	1.54	1.23	1.39	1.48
Sulfur	2.56	1.54	1.79	1.92
Estimated Value of Available Nutrients in Surface Applied Manure <sup>1</sup>		\$2.87	\$3.50	\$3.81

### Additional Information

<sup>1</sup> Value based on commercial fertilizer costs as of 9/1/2005:

N (urea) \$0.38/lb  
 $P_2O_5$  (Triple Superphosphate) \$0.35/lb  
 $K_2O$  (Potash) \$0.21/lb  
S (Elemental Sulfur) \$0.27/lb

Samples Analyzed By:  
UW Soil & Forage Analysis Lab  
8398 Yellowstone Drive  
Marshfield, WI 54449  
(715) 387-2523

# WASTE ANALYSIS REPORT

COOPERATIVE EXTENSION  
University of Wisconsin-Extension  
University of Wisconsin-Madison  
Soils Department, Madison, WI

Report #: 8245

Lab #: 5797-5801

Date received: 9/8/2005

Account: 557366

Client: Cold Springs Farm

County: out-of-state/unknown

Date processed: 9/13/2005

(b) (6)

Send to:

Cold Spring Farm -

(b) (6)

Report also available online at <http://uwlab.soils.wisc.edu/reports>.

Lab #: 8245 Access code: acep

## Sample Information

Sample Name: 5799-3

Material: Beef

Type of Storage: bedded pack

Storage System: Solid

Type of Bedding: sawdust/shavings/bark

## Laboratory Analysis

Moisture: 48.30%

Dry Matter: 51.70%

### Estimated Available Nutrient Credits for Manure:

	Total Nutrients lbs/ton	In 1st Year of Application lbs/ton	If Applied 2 Consecutive Yrs lbs/ton	If Applied 3 Consecutive Yrs lbs/ton
Total Nitrogen (Injected)	14.48	5.07	6.52	7.24
Total Nitrogen (Surface Applied)	14.48	3.62	5.07	5.79
Total Phosphorus as $P_2O_5$	7.58	4.55	5.31	5.69
Total Potassium as $K_2O$	9.93	7.94	8.94	9.43
Sulfur	3.00	1.80	2.10	2.25
Estimated Value of Available Nutrients in Surface Applied Manure <sup>1</sup>		\$4.25	\$5.16	\$5.61

## Additional Information

<sup>1</sup> Value based on commercial fertilizer costs as of 3/1/2004:

N (urea) \$0.31/lb  
 $P_2O_5$  (Triple Superphosphate) \$0.32/lb  
 $K_2O$  (Potash) \$0.16/lb  
S (Elemental Sulfur) \$0.22/lb

**Samples Analyzed By:**

UW Soil & Forage Analysis Lab  
8396 Yellowstone Drive  
Marshfield, WI 54449  
(715) 387-2523

# WASTE ANALYSIS REPORT

COOPERATIVE EXTENSION  
University of Wisconsin-Extension  
University of Wisconsin-Madison  
Soils Department, Madison, WI

Report #: 8245

Lab #: 5797-5801

Date received: 9/8/2005

Account: 557368

Client: Cold Springs Farm

County: out-of-state/unknown

Date processed: 9/13/2005

Send to:

Report also available online at <http://http://uwlab.soils.wisc.edu/reports>. Lab #: 8245 Access code: acep

## Sample Information

Sample Name: 5797-1 *coment pens*

Material: Beef

Type of Storage: bedded pack

Storage System: Solid

Type of Bedding: sawdust/shavings/bark

## Laboratory Analysis

Moisture: 72.30%

Dry Matter: 27.70%

### Estimated Available Nutrient Credits for Manure:

	Total Nutrients lbs/ton	In 1st Year of Application lbs/ton	If Applied 2 Consecutive Yrs lbs/ton	If Applied 3 Consecutive Yrs lbs/ton
Total Nitrogen (Injected)	16.07	5.62	7.23	8.04
Total Nitrogen (Surface Applied)	16.07	4.02	5.62	6.43
Total Phosphorus as P <sub>2</sub> O <sub>5</sub>	11.42	6.85	7.99	8.57
Total Potassium as K <sub>2</sub> O	11.90	9.52	10.71	11.30
Sulfur	2.38	1.43	1.67	1.79
Estimated Value of Available Nutrients in Surface Applied Manure <sup>1</sup>		\$6.32	\$7.64	\$8.29

### Additional Information

- <sup>1</sup> Value based on commercial fertilizer costs as of 9/1/2005:
- N (urea) \$0.38/lb
  - P<sub>2</sub>O<sub>5</sub> (Triple Superphosphate) \$0.35/lb
  - K<sub>2</sub>O (Potash) \$0.21/lb
  - S (Elemental Sulfur) \$0.27/lb

Samples Analyzed By:  
UW Soil & Forage Analysis Lab  
8396 Yellowstone Drive  
Marshfield, WI 54449  
(715) 387-2523

# WASTE ANALYSIS REPORT

COOPERATIVE EXTENSION  
University of Wisconsin-Extension  
University of Wisconsin-Madison  
Soils Department, Madison, WI

Report #: 8245

Lab #: 5797-5801

Date received: 9/8/2005

Account: 557368

Client: Cold Springs Farm

County: out-of-state/unknown

Date processed: 9/13/2005

Send to:

Report also available online at <http://http://uwlab.soils.wisc.edu/reports>. Lab #: 8245 Access code: acep

## Sample Information

Sample Name: 5798-2 *concrete pit*

Material: Beef

Type of Storage: concrete pit

Storage System: Solid

Type of Bedding: sawdust/shavings/bark

## Laboratory Analysis

Moisture: 84.20%

Dry Matter: 15.80%

### Estimated Available Nutrient Credits for Manure:

	Total Nutrients lbs/ton	In 1st Year of Application lbs/ton	If Applied 2 Consecutive Yrs lbs/ton	If Applied 3 Consecutive Yrs lbs/ton
Total Nitrogen (Injected)	5.69	1.99	2.56	2.85
Total Nitrogen (Surface Applied)	5.69	1.42	1.99	2.28
Total Phosphorus as P <sub>2</sub> O <sub>5</sub>	2.17	1.30	1.52	1.63
Total Potassium as K <sub>2</sub> O	2.31	1.85	2.08	2.19
Sulfur	0.60	0.36	0.42	0.45
Estimated Value of Available Nutrients in Surface Applied Manure <sup>1</sup>		\$1.48	\$1.84	\$2.02

### Additional Information

1 Value based on commercial fertilizer costs as of 9/1/2005:

N (urea) \$0.38/lb  
P<sub>2</sub>O<sub>5</sub> (Triple Superphosphate) \$0.35/lb  
K<sub>2</sub>O (Potash) \$0.21/lb  
S (Elemental Sulfur) \$0.27/lb

**Samples Analyzed By:**

UW Soil & Forage Analysis Lab  
8396 Yellowstone Drive  
Marshfield, WI 54449  
(715) 387-2523

# WASTE ANALYSIS REPORT

COOPERATIVE EXTENSION  
University of Wisconsin-Extension  
University of Wisconsin-Madison  
Soils Department, Madison, WI

**Report #:** 8245**Lab #:** 5797-5801**Date received:** 9/8/2005**Account:** 557368**Client:** Cold Springs Farm**County:** out-of-state/unknown**Date processed:** 9/13/2005**Send to:**Report also available online at <http://http://uwlab.soils.wisc.edu/reports>.**Lab #:** 8245 **Access code:** acep**Sample Information****Sample Name:** 5801-5 - Pond**Material:** Beef**Type of Storage:** other**Storage System:** Solid**Type of Bedding:** none**Laboratory Analysis****Moisture:** 99.80%**Dry Matter:** 0.20%**Estimated Available Nutrient Credits for Manure:**

	<u>Total Nutrients</u> lbs/ton	<u>In 1st Year of Application</u> lbs/ton	<u>If Applied 2 Consecutive Yrs</u> lbs/ton	<u>If Applied 3 Consecutive Yrs</u> lbs/ton
Total Nitrogen (Injected)	0.20	0.07	0.09	0.10
Total Nitrogen (Surface Applied)	0.20	0.05	0.07	0.08
Total Phosphorus as P <sub>2</sub> O <sub>5</sub>	0.04	0.02	0.03	0.03
Total Potassium as K <sub>2</sub> O	0.94	0.75	0.85	0.89
Sulfur	0.03	0.02	0.02	0.02
Estimated Value of Available Nutrients in Surface Applied Manure <sup>1</sup>		\$0.20	\$0.23	\$0.24

**Additional Information**<sup>1</sup> Value based on commercial fertilizer costs as of 9/1/2005:

N (urea) \$0.38/lb  
P<sub>2</sub>O<sub>5</sub> (Triple Superphosphate) \$0.35/lb  
K<sub>2</sub>O (Potash) \$0.21/lb  
S (Elemental Sulfur) \$0.27/lb

## **Cold Springs Farm**

### **Manure Waste Information**

---

Cold Springs Farm has made every effort to divert clean rain water from manure waste areas and to keep manure waste clear of any clean water. Catch basins, ponds, gutters and diversion berms are examples and identified within this application.

Now, as it becomes time to handle the waste on a daily basis, we use equipment that is in top operational condition. All guards and splash panels are left in place and the equipment is inspected frequently for any leaks. All our operators know not to overfill a spreader and a speed limit of 20mph is adhered to. Such attention has proven itself as there have been no spills or accidents with our manure hauling. We operate two slinger spreaders and one box spreader. The following pages identify where every load of manure waste is taken.

## Manure Application Equipment Methods

Form 10-A

(Check all that are used.)

### Solid or semi-solid manure:

☒ Tractor-drawn box spreader

☐ Truck mounted spreader

☐ Other \_\_\_\_\_

### Liquid manure and wastewater, with one or more vehicles involved:

☐ Over-the-road nurse tanker

☐ Field applicator tank

☐ Towed hose "umbilical cord" with tractor mounted toolbar

### Manure or wastewater pumped to an in-field irrigation system:

☐ Hard-hose traveling gun

☐ Center pivot irrigation

☐ Stationary gun irrigation

☐ Solid set sprinklers

☐ Other \_\_\_\_\_

### Soil incorporation method:

☒ Broadcast, no incorporation

☐ Broadcast, with separate incorporation step the same day

☒ Broadcast in combination with shallow incorporation (rolling tine, S-tine sweeps, concave coulters)

☐ Soil injected (sweep, knife, coulter, etc.)

### Other:

☐ Equipment uses variable rate application rate based on within-field site-specific information.

☐ Equipment generates as-applied maps showing:

☐ Path of implement in the field

☐ Path of implement and application rate

☐ Other \_\_\_\_\_

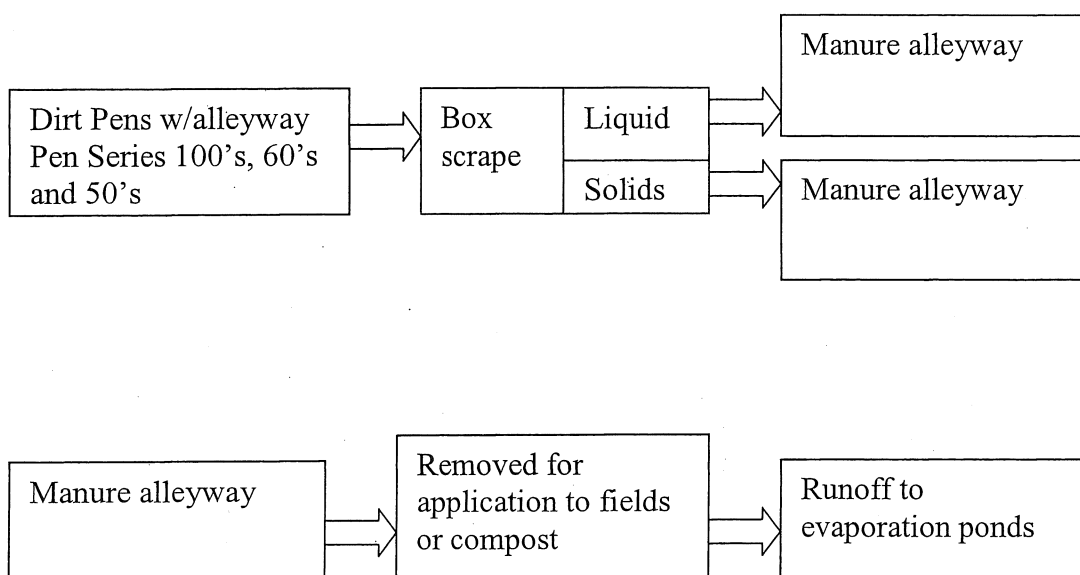
# Appendix B

## Manure “Management Train”

### Step 4

#### Manure System “Management Train” For Dirt Mound Pens

Each dirt mound pen was engineered and built to control & collect animal waste. Pens are box scraped and cleaned of manure from feeding aprons frequently. Run off waste is collected in an “alleyway” which facilitates bulk removal of waste. The alleyway is shaped to collect all runoff and a pair of evaporation ponds collects any runoff. Best Management Practices are in place to monitor these ponds; a) checking the level against staked indices, b) inspecting banks for erosion or rodent holes and c) maintaining dirt & hay bales (at each pond) along with silt fence and pumps in the event of any emergency. Following is a flow diagram & photograph(s):



# Appendix B

## Manure “Management Train”

### Step 4

#### Manure System “Management Train” For Concrete Pens

Each concrete pen was engineered and built to control animal waste and to collect any such waste and rain water. The sheds are guttered and diverted to grassy waterway. Pens are cleaned weekly and waste is applied, composted or stored. Run off waste is channeled (via concrete slew) into a concrete pit. This pit is monitored daily and, when appropriate, agitated and pumped into spreaders for application. In the event of an overflow, there is a retention pond below the pit. Following is a flow diagram & photograph(s):

